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ABSTRACT

Designed to help those who plan and allocate resources for California's community colleges in evaluating future trends and identifying responsible policy directions, this report seeks to: (1) describe present and future trends and their variations within California; (2) determine the applications of those trends for community colleges; (3) identify alternative planning directions for community colleges; and (4) determine those directions that most fully maximize the community college's future contributions. Each chapter of the report states a premise, examines data and trends supporting that premise, and considers implications for community colleges. Chapter 1 focuses on anticipated changes in the demographics and lifestyle of Californians. Chapter 2 concentrates on issues related to societal complexity and changing social values, changing skill requirements and skills obsolescence, and demands for increased productivity. After chapter 3 considers the variations among California communities, chapter 4 looks at the effects of the information and technology revolution on education and learners. Chapter 5 examines the question of educational quality in the context of change, and chapter 6 addresses institutional renewal as an essential response to rapid change. Finally, chapter 7 tries to project the future course of the state's economy and to examine its impact on the funding of community colleges. A four-page list of source documents that provide the basis for trends cited in "Contours of Change" concludes the document. (EJV)

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CONTOURS OF CHANGE

A WORKING VISION FOR THE CALIFORNIA COMMUNITY COLLEGES TO THE YEAR 2000

JC 870 104

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IMPROVING EVALUATION AND PLANNING IN COMMUNITY COLLEGES

A FIPSE PROJECT 1985

CONTOURS OF CHANGE

IMPROVING COMMUNITY COLLEGE EVALUATION AND PLANNING

A FIPSE PROJECT

A Working Vision For The California Community Colleges

To The Year 2000

CHANCELLOR'S OFFICE
CALIFORNIA COMMUNITY COLLEGES
WESTERN ASSOCIATION ACCREDITING COMMISSION
FOR COMMUNITY AND JUNIOR COLLEGES

NOVEMBER 1985

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A WORKING VISION OF THE FUTURE

America invented the community college and reinvents it as needed. How else would we have fulfilled the American dream and practical goal of education adequate for all our citizens! However, there have been times when it drifted, buffeted by the vagaries of social pressures. This venture into the future is an effort to model that future instead of drifting into it. The only way to insure that future or any future is not to leave it to chance, but to plan for it.

All of us who care about the students and their colleges need a vision—a vision of the year 2000 and how community colleges should function at that time of changed demography, economy and social values. The Planning and Future-Study Committee has worked long and hard to carve out such a vision for you. We ask you to take the quantum leap which we took, from the problem-mired mind-set of the present to a mind-set in the future. We ask you to set your sights on the optimum condition for the colleges in the year 2000, framing your view within a value intrinsic to community colleges: that as education providers, colleges offer open access at low cost. Into this vision we filtered practical considerations. After all, it is a working vision as opposed to that of a true futurist. We took no tangential paths. We considered what would be best for California citizens, given the significant trends, when the implications led in directions contrary to the current conventional wisdom.

Work by the Planning and Future-Study Committee on *Contours of Change* was supported by the project on Improving Evaluation and Planning in Community Colleges. This project was sponsored by the Chancellor's Office, California Community Colleges and the Western Association Accrediting Commission for Community and Junior Colleges with support from the Federal Fund for Improvement of Postsecondary Education (FIPSE).

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INTRODUCTION

Purpose

The often-quoted statement by Peter Drucker that the "... question is not how to do things right but how to find the right things to do..." is especially pertinent in view of changes expected in California during the rest of this century. Since these changes will have a significant impact on education, it is essential that community colleges look some distance into the future when attempting to determine the right things to do.

Contours of Change is designed to help those who plan and allocate resources for California community colleges to be able to evaluate future trends and identify responsible policy directions. Consequently, it is broad in scope, but short in length—covering only those trends and implications that appear most important.

In developing this statement about the future, efforts have focused on:

- describing present and future trends and their variation within California;
- determining the implications of those trends for community colleges;
- identifying alternative planning directions for community colleges; and
- determining those directions that most fully maximize the community colleges' contribution toward a better future.

Among its many uses, *Contours of Change* can:

- guide the development of short-term actions by the State Board and by local district boards;
- provide background for the development of State and local policies;
- assist local community college planning by interpreting the emerging statewide interest in community colleges;
- support proposed program and budget changes; and
- serve as input to specific efforts such as the current Master Plan study by the Legislature, the joint (Board/local trustees) Governance Commission, and other important activities.

To be most useful, this statement will need periodic review and revision. Unexpected changes occur, sometimes referred to by futurists as "wild cards" or "shocks." The political and consequent public policy environment changes continually; often in unpredictable ways. New public issues emerge with dramatic suddenness. Statements about the preferred directions for California community colleges need to be dynamic as well as visionary.

Process

This document results from activities undertaken for a project on Improving Community College Evaluation and Planning, cosponsored by the State Chancellor's Office of the California Community Colleges and the Western Association Accrediting Commission for Community and Junior Colleges, and supported in part by the Federal Fund for Improvement of Postsecondary Education (FIPSE). A series of workshops, symposia and charrettes on planning were held by FIPSE staff for community college personnel during 1983. These efforts are described in two project reports: *Models of Strategic Planning in Community Colleges* and *College Planning: Strategies for Assessing the Environment*. Discussion at these sessions focused on institutional planning, but suggested the need for greater state-level focus. Consequently, staff initiated the Planning and Future-Study project. Work on the project began in February 1984 when a committee of community college planners was formed to guide the project and help develop a paper on community college planning and the techniques of future-study.

The initial planning paper was discussed by the California Community Colleges State Board of Governors in March 1984. In addition, the Board examined the nation's and California's important demographic and socioeconomic trends and how community colleges can deal with these trends through strategic planning. Subsequent Board discussions in July and October 1984 dealt with the factors important to the planning of a large, urban, multi-college district and with more general planning themes important to colleges state-wide. A report of these discussions is contained in *Planning and Future-Study* issued in November, 1984.

To focus the difficult task of looking into the future, the Planning and Future-Study Committee researched a vast literature on future trends and selected those most important to community colleges. The pertinent sources are listed in a reference section at the end of this document. From this material, possible implications for colleges were identified. This led to development of a series of preliminary papers which were then reviewed in two planning symposia, attended by state and local personnel, held during October and December 1984.

These sessions enabled the committee to recast the papers into a shorter document that synthesized trends and possible implications. The implications in this shorter document were summarized and discussed with the Board at its March 1985 meeting. Further changes resulted in a complete draft of the report, *Contours of Change*, which was discussed at two forums, attended by over 60 individuals from community colleges and other organizations, in San Francisco and Los Angeles during May 1985. The forums were followed by further in-depth discussion of the document by the Board in a full-day workshop, also in May 1985.

Input from the workshop and forums, together with further work by Chancellor's Office staff and the Planning and Future-Study Committee, was presented to the Board in July 1985. Board comments led to additional modifications that appear in this final version of *Contours of Change*.

A GROWING AND DIVERSE POPULATION

PREMISE 1. A GROWING AND DIVERSE POPULATION

FIVE MILLION MORE CALIFORNIANS AND THE NATION'S MOST DIVERSE POPULATION BY AGE, ETHNICITY, AND LIFESTYLES WILL REQUIRE MAJOR CHANGES IN POST-SECONDARY EDUCATION.

Future changes in the demographics and lifestyles of Californians will result in greater demand for postsecondary education and in substantially more variation of individual educational needs than ever before.

TRENDS

The state's expected demographic changes are dramatic and relatively certain:

- California continues to grow faster than the nation as a whole.

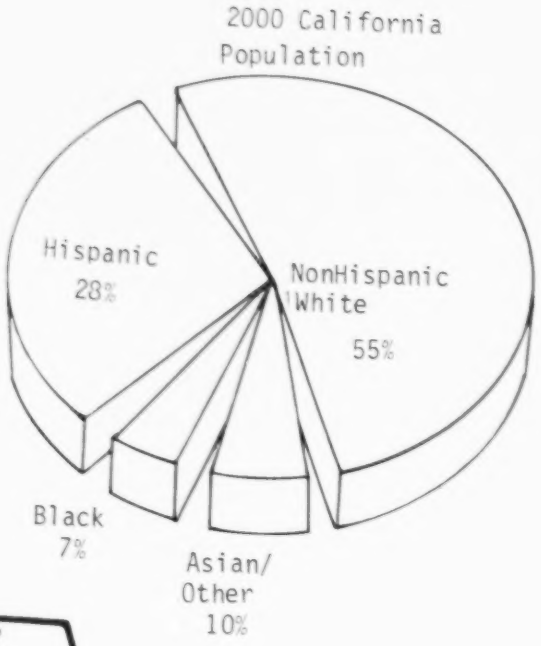
  The state's population will increase by one-fifth, from 26 million to 31 million, by the year 2000.

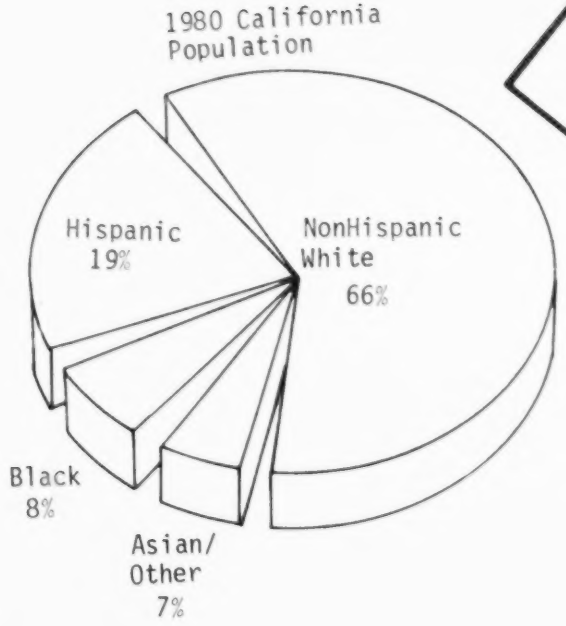
- Among California adults, the 35 to 54 year-old age cohort is the most rapidly growing.

  The 18 to 24 year-old traditional college-going age cohort will decline until 1990; then increase, but not regain its 1980 level until near the end of the century.

- California is first among all states in the numbers of foreign-born, primarily from the Pacific Basin, including Asia, Mexico, Central and South America.

Racial and ethnic minorities comprise one-third of California's current population. By contrast, half the state's growth during the next decade will be comprised of Hispanics and another one-fifth of the state's growth will be comprised of Asians.



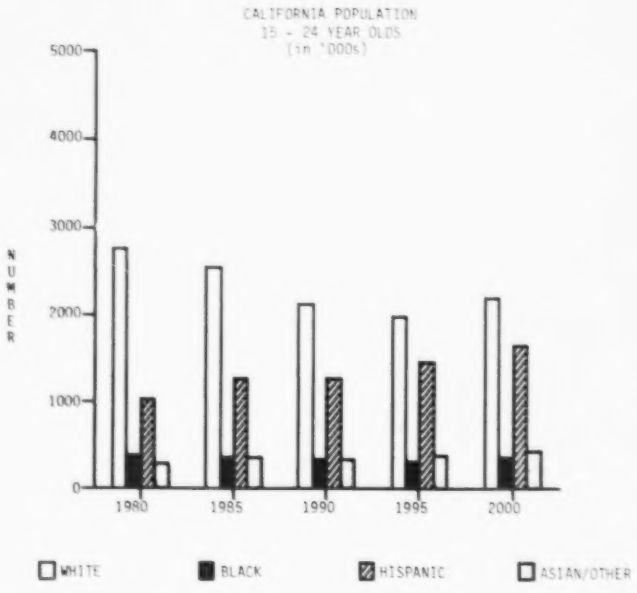


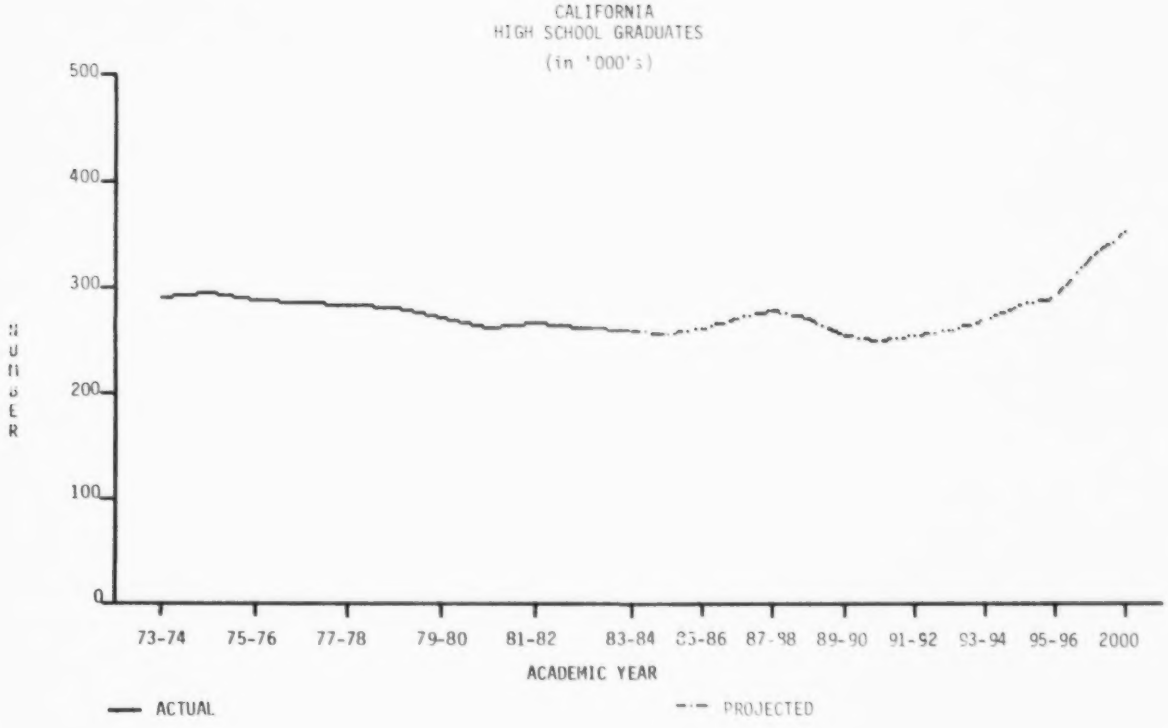
By the year 2000 minorities will constitute nearly 45 percent of California's population.

- The nation's undocumented alien population is expected to number ten million by the early 1990s, half of whom are likely to reside in California—a five-fold increase over 1980. This group will be composed primarily of young Hispanics.

Passage of immigration legislation would make many of these individuals legal residents of California.

- Growth rates among different racial and ethnic groups that make up the 15 to 24 year-old age cohort will change substantially. The number of Whites will decrease and be in the minority by the year 2000. The number of young Hispanics will increase by half and the number of young Asians will exceed the number of young Blacks beginning in the 1990s.
- California's high school graduation rate has dropped from 76 percent to 68 percent in the past five years. Even if the rate stabilizes, the annual number of high school graduates will exceed today's total of 260,000 in just eight of the next 15 years. The number will fluctuate through the 1980s, then steadily rise in the 1990s.



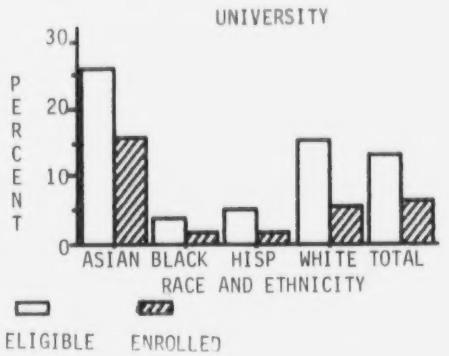


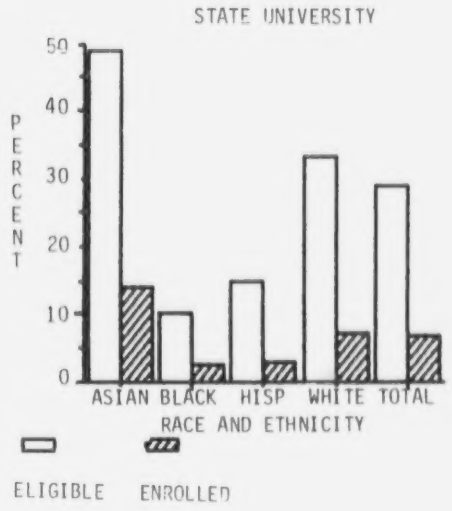
- High school graduation rates of Blacks and Hispanics are substantially below that of Whites and Asians.

  Moreover, Black and Hispanic graduates score significantly lower on college entrance exams and are less-often eligible to attend four-year colleges as freshmen than other high school graduates.

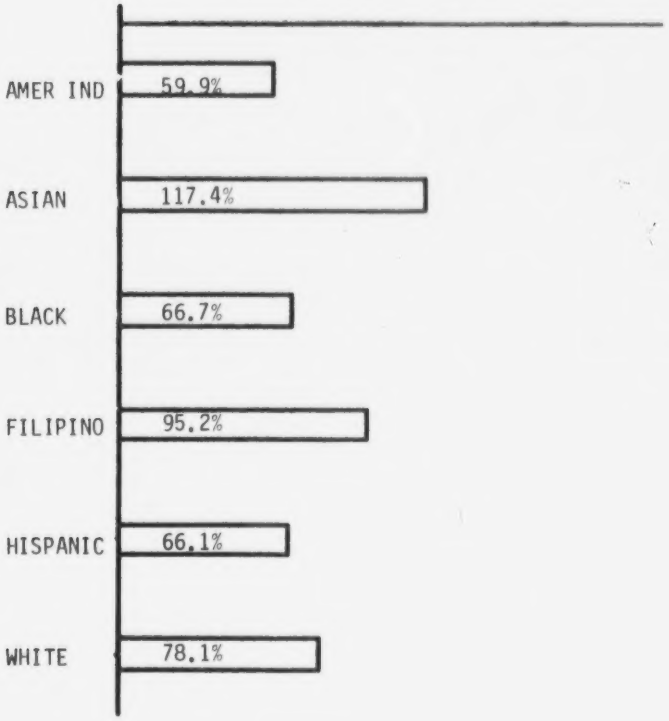
  These patterns can be expected to continue unless major changes are made in elementary and secondary school education.

PERCENT OF CALIFORNIA PUBLIC HIGH SCHOOL GRADUATES WHO WERE ELIGIBLE FOR ADMISSION AND WHO ENROLLED IN PUBLIC FOUR-YEAR INSTITUTIONS, FALL 1983





1983 GRADUATES AS A PERCENT OF 1979 NINTH GRADE STUDENTS CALIFORNIA PUBLIC HIGH SCHOOLS



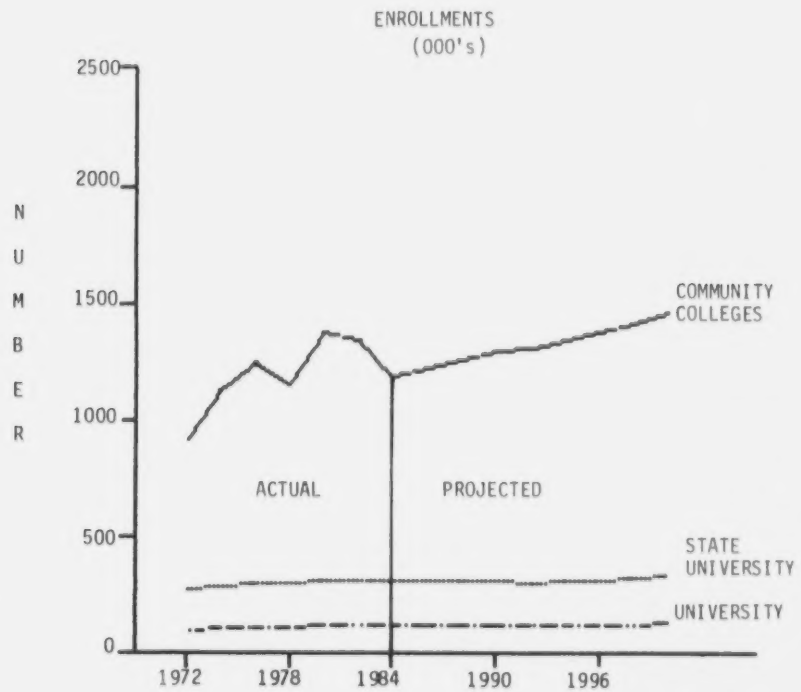
IMPLICATIONS

A. COMMUNITY COLLEGES SHOULD PREPARE FOR INCREASING AND CHANGING DEMANDS FOR THEIR EDUCATIONAL SERVICES OVER THE REST OF THIS CENTURY.

An increasing California adult population will force the demand for community college education to higher levels. Adequate funding, together with increasing numbers of temporarily unemployed adults who need retraining (see Premise 2), will likely result in greater enrollments than would be dictated by population growth alone. The State Department of Finance projects community college enrollments as increasing by 12 percent to more than 1,332,000 students by 1993 and another 8 percent to 1.5 million by the year 2000. These projections, however, embody depressed enrollment rates due to recent budget constraints. Community college participation has dropped from one in 12 California adults to one in 17 adults during the seven-year period following Proposition 13 (1978).

A return to mid-1970s participation rates would result in community college enrollments totalling 1.5 million in 1993 and 2.0 million by the year 2000.

Expected growth in the University (UC) and State University (CSU) mirrors, to a large extent, the trend in 18 to 24 year-old populations.



Based on expected changes in the demography and social structure of California, potential community college students may be grouped into three general categories.

- Traditional college-going, 18 to 24 year-olds.

  Generally enrolled for the first time, these individuals want to learn an occupational skill or prepare for transfer to a four-year institution. This group, now 45 percent of community college enrollment, will decrease in absolute numbers and as a proportion of total enrollment until the mid-1990s.

- Individuals with recurring educational needs.

  Some of this large and diverse group are out of work and seek career or job skills. Others, with jobs, seek skills that will enable them to fully realize their potential. Still others, often older, seek survival skills. This entire group and its needs will increase dramatically during the rest of this century.

- The new students.

  Many of these students are foreign-born and nearly all are from a minority racial and ethnic background (though in their communities they may comprise the majority of the population). They (a) are often the first in their family to undertake postsecondary education, (b) often possess limited English skills, (c) typically come from low income economic circumstances, and (d) often are not prepared for employment. This group is the smallest, but most rapidly growing of the three student types.

Thus, the emerging demography of California during the next 15 years will result in a potential community college enrollment that is older, less wealthy, less proficient in language skills, and, because of an increasing number of new students and students with recurring needs, in need of a greater variety of postsecondary education experiences than is the case today.

B. EQUALITY OF ACCESS SHOULD BE REAFFIRMED.

It is imperative that adults in need of postsecondary education be served. The social consequences of not educating these individuals are serious and the costs far greater than the cost of their education. If community colleges are to play their appropriate role in providing these educational services, they should continue to provide equal access, through open admissions to the college and low cost of enrollment.

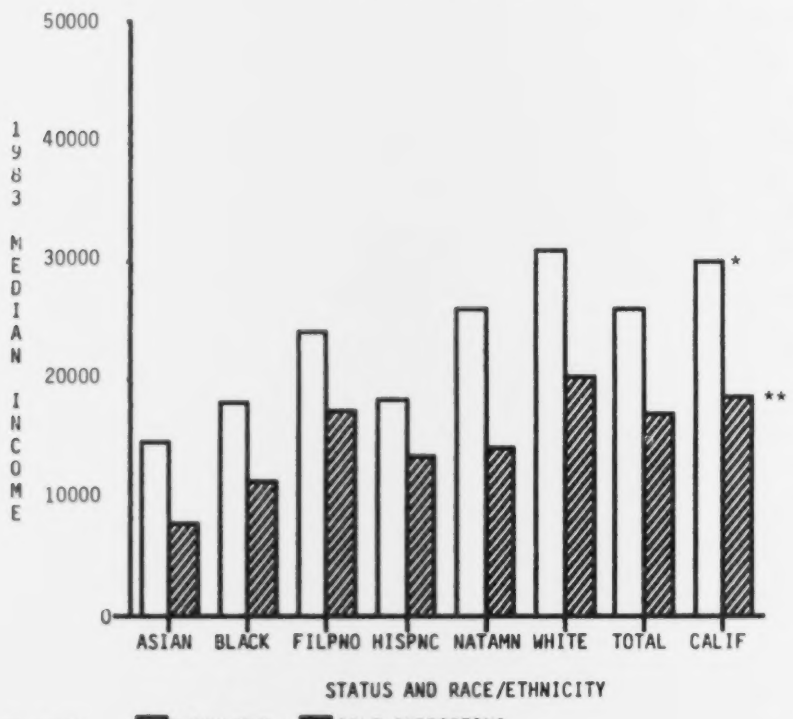
- Asians, Blacks, and Hispanics report the lowest family incomes of all students attending community colleges. This pattern is not likely to change significantly during this century.

The consequence of a less-wealthy potential student population is the need to restrict cost increases or failing that, to provide adequate financial aid to students in a timely and effective way so as to influence their college-going decision. The policy of open admissions facilitates college-going for high school graduates and those who may profit from community college instruction.

Maintaining open admissions and low cost, however, requires (a) an increase in the colleges' resource base, (b) limits on increases in those costs (like fees, etc.) faced by students, and (c) substantial increases in student financial aid, particularly if fees and other student costs do increase.

The shift from federal student financial aid grants to loans and a general decline in student buying power from federal financial aid during the past five years may continue. If so, the state will need to increase its existing financial aid program for community college students by several fold. Where it is more efficient, colleges may wish to provide this aid in-kind, such as through child care and development centers and off-campus neighborhood classes. Costs to students are controlled also by the placement of college campuses and outreach centers within commuting distance of virtually all Californians.

INCOME BY RACE/ETHNICITY



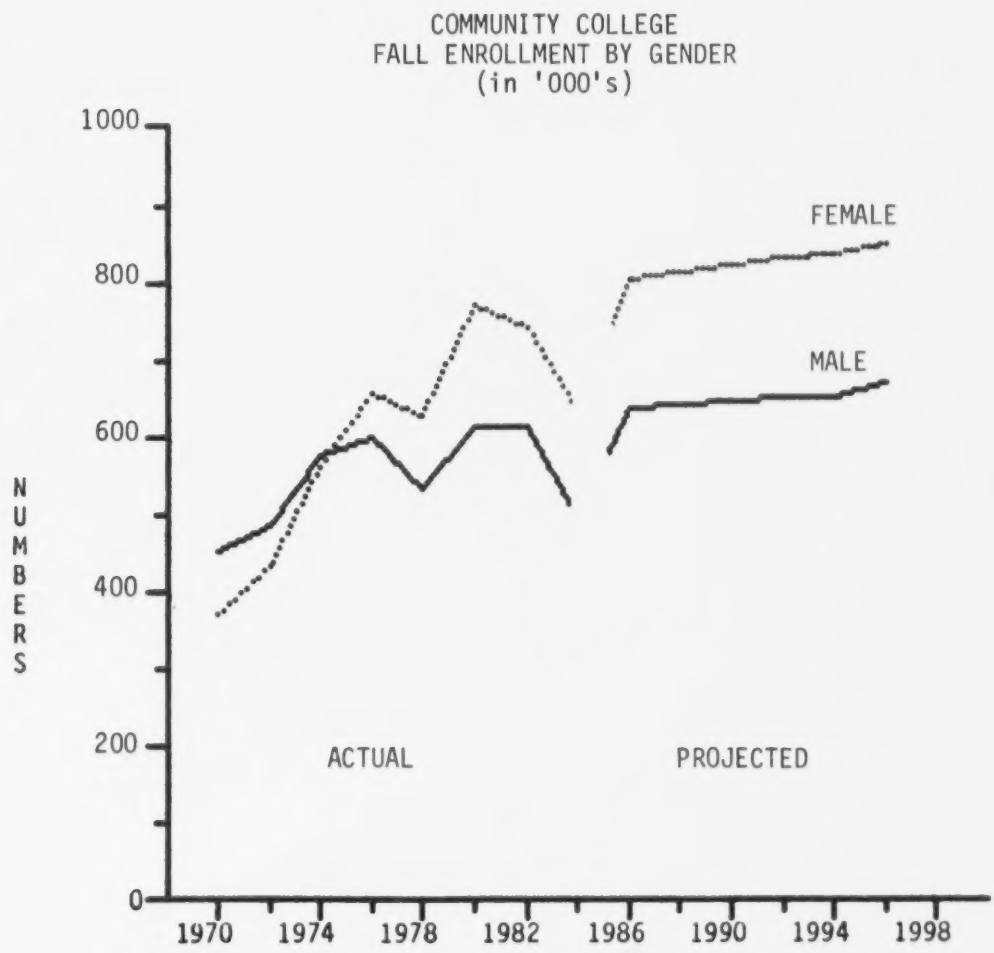
CALIFORNIA DATA:
* Median family income where householder is between ages 40 and 54.
** Median family income for all Californians.

16

Equality of access also involves the removal of physical and psychological barriers to attendance by the disabled. At present, community colleges enroll about 50,000 disabled students. The number of disabled students needing education in the future is expected to increase more rapidly than the general population.

Increasing numbers of older and elderly students will require community colleges to pay greater attention to the location and time of day of classes. By 1993, the proportion of students over the age of 35 will have increased from 24 percent to 34 percent.

The rapid increase in female students during recent years is expected to continue into the early 1990s. The most rapidly growing gender/age cohort among community college students has been that comprised of women aged 20 to 24. Many of these women have recurring educational needs. Increasing numbers are single and are head of household, possibly training for their first entry into the labor market. Access for these students is dependent upon the time and location of classes and, often more important, the existence of special services such as child care and development centers, career counseling, and financial aid.



SOCIETAL COMPLEXITY AND SKILLS OBSOLESCENCE

PREMISE 2. SOCIETAL COMPLEXITY AND SKILLS OBSOLESCENCE

COMPLEX SOCIETAL CHANGES AND GROWING CAREER SKILL OBSOLESCENCE WILL ACCELERATE THE DEMAND FOR RECURRING EDUCATION.

Rapid changes in technology, the economy, lifestyles, and in values over the next 15 years will result in Californians requiring more education, on a more frequently recurring basis, than has been the case in the past. This education also will need to be broader in scope.

TRENDS

The lifestyles and values of Californians will undergo rapid change during the rest of this century:

- California will become more globally-interdependent as a result of its being in the forefront of scientific and technological development, a prominent relationship to the Pacific Basin, and the educational level of its citizens.
- Many communities in California will undergo intercultural assimilation of the kind already underway in Hawaii.
- Ninety percent of all the scientists who have ever lived are alive today. The pools of knowledge and scientists are expected to increase by nearly one-half over the next 15 years.
- Advancements in science and technology will continue to raise but not answer, many ethical and moral questions such as those about creating new forms of life and prolonging life.
- Because of changes in communications technology, more free hours of leisure activity will be spent at home, using television, video cassettes and the video-disc. More recreation will be "closer to home."

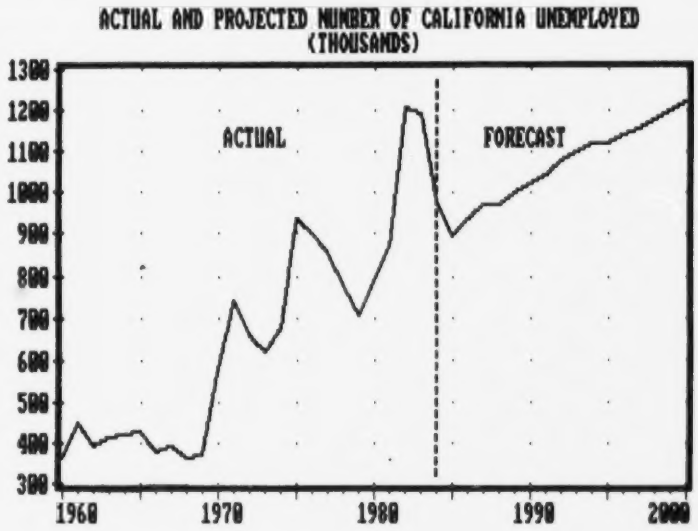
- The divorce rate is projected to increase. In 1960, three-fourths of all households had a husband and wife. That proportion could drop to one-half by the end of this decade.
- Today, 50 percent of all children less than 18 years-of-age have working mothers, and the percentage is increasing.
- By 1990, two-thirds of all women will be in the workforce and will need career retraining several times during their lifetimes.
- The emergence of single, female-headed households is particularly significant among Blacks. Seven of every ten Black children under the age of 18 live in female-headed families with incomes below the poverty level. Unless there are significant socioeconomic changes, this pattern will continue.

Increasing technological change will result in more rapid obsolescence of skills and careers.

- The average worker will make five to six career changes before he or she retires. The notion of "first, education—then, work" is being replaced by a life-long pattern where education and work are interspersed.
- Average training levels in the labor force will continue to increase through the early 1990s. This is due to
  - assimilation of large numbers of workers in the 1970s
  - decreased growth in the 16 to 24 year-old cohort of the labor force.
- Technological innovation will require the retraining of existing workforce members to a degree equal to, if not greater than, the training of entering workforce members.
- While the future course of California's economy is uncertain, it is expected to be stronger than the nation as a whole because of its
  - industrial make-up which leans more toward service, communications, and high technology and less toward construction and basic manufacturing (California has one-fourth of the nation's high technology jobs, located in the most rapidly growing industries)
  - expanding trade with the Pacific Basin: California and the other 12 western states that trade mostly with Pacific Basin countries account for one-fourth of the nation's trade and this proportion is increasing. In 1982, Los Angeles passed New Orleans to become the nation's second most-active port.
- California's economy, like that of the nation, will continue to cycle through periods of expansion and recession.
- The state's labor force and number of jobs will have increased by one-fifth during the decade ending 1990.

- Despite a strong economy, there will be more unemployed Californians over the next 15 years than was the case during the 1960s and 1970s.

- The average workweek will continue its decline, from 35 hours in 1985 to less than 30 hours by the year 2000.



IMPLICATIONS

C. COMMUNITY COLLEGE INSTRUCTION SHOULD STRESS SHARED VALUES ABOUT PEOPLE AND THE SOCIETY IN ORDER TO HELP INDIVIDUALS RESPOND TO RAPID CHANGE.

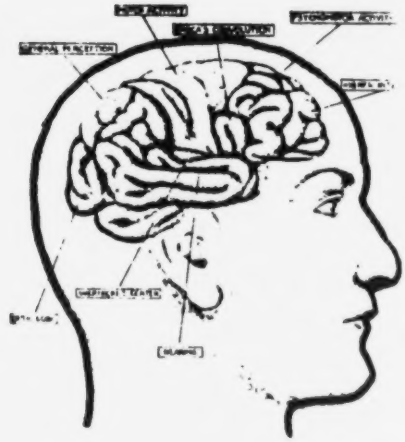
The rest of this century will be a period of major social transition—the role of families may diminish and people could become more isolated, just when there is a need to become more aware of community, national, and international interests. Traditionally, fundamental values and attitudes have been transmitted by the family. This process is changing. At the same time, the purpose of other social institutions will change and old assumptions will increasingly conflict with new ones, making it difficult to identify shared values.

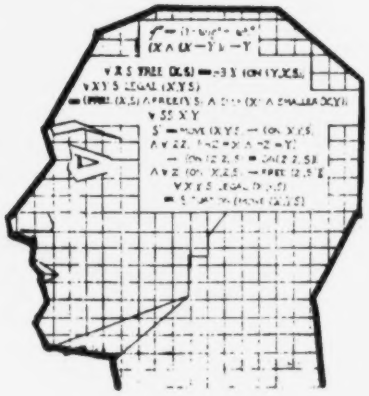
The local community college can help individuals address the issues and value conflicts raised by these trends and to develop those shared beliefs essential to the best interests of the total society. This can be accomplished in large part by highlighting instruction in the humanities and arts. These programs take students beyond the "what" of the popular realm of science, technology, and vocational skills into the "why," by imparting a cultural literacy: an awareness of society's heritage and an informed sense of community.

During the past 20 years, the proportion of community college instruction in the humanities and social science has dropped from 39 percent to 32 percent, but training in science and technology has increased substantially. While students may continue to prefer scientific, job-oriented training, community colleges will need to place renewed emphasis on desciplines such as history, anthropology, philosophy, literature, ethics and the arts—where the topics of study are fundamental values and the human experience.

As the workweek declines and as more individuals become at least temporarily unemployed, there will be increased need for general education in cultural and interpersonal skills.

The quality of California's future depends in part on the ability of its citizens to reconcile the values necessary to promote technological progress and the values necessary for a cohesive society. Community colleges have a major role to play in this process.





D. COMMUNITY COLLEGE INSTRUCTION SHOULD STRENGTHEN SKILLS THAT ENHANCE CAREER ADAPTABILITY.

Technological change and the "maturing" of the labor force have several implications. The "experience curve" of California's workers will rise, thereby increasing productivity. The technological changes will require the retraining of workforce members to a degree equal to, if not greater than, the training of entering workforce members.

These trends suggest that community college education ought to be less specific and more general. If so, the curriculum should place more emphasis on: reasoning, problem-solving, knowledge integration, and analytical skills, i.e., "learning how to learn," and less emphasis on teaching specific job skills such as surveying, stenography, and drafting.

Short-term instruction in specific skills such as surveying could be offered through cooperative work experience arrangements, while longer certificate or degree programs would encompass a broad curriculum that would include job-specific or job entry skills. These skills will continue to be of particular importance to the increasing numbers of underprepared and low income students.

E. COMMUNITY COLLEGES SHOULD PLACE MORE EMPHASIS ON KEEPING CALIFORNIA'S WORK-FORCE CURRENT AND PRODUCTIVE.

Changes in California's economy affect the community colleges in two major ways. First, economic conditions determine the level of tax revenues. Second, these same economic conditions, along with lifestyles, determine under- and unemployment and, therefore, determine a large part of the demand for the educational programs and services offered by community colleges.

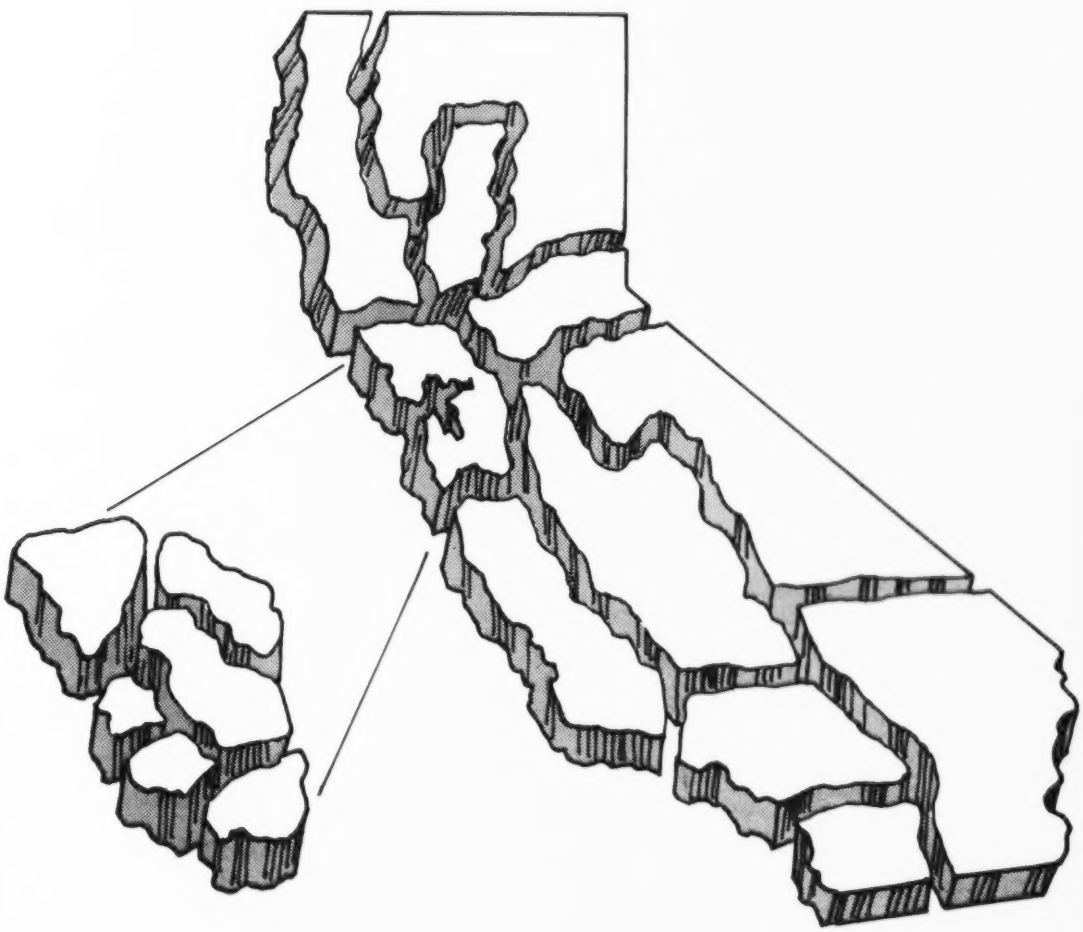
When the economy turns down, unemployment rises and individuals turn to community colleges for training in the skills that will enable them to become employed once again. Enrollment increases at rates that exceed those expected from changes in the state's demography. An improving economy has the opposite effect.

Despite California's economic strength, the number of unemployed in the state's labor force will likely increase throughout the rest of this century. The unemployment rate would have to fall below six percent (a situation that hasn't occurred since the 1960s) for there to be fewer unemployed Californians by 1990.

With increased technological change, more individuals will be temporarily out-of-work and in search of new career and/or job skills. Economic downturns compound this problem and add to the need for more frequent retraining.

Community college programs currently respond to student preferences that are equally distributed among (a) retraining for new careers, (b) training for initial careers, and (c) upgrading of present job skills. This balance may have to change, with greater emphasis placed on retraining.

COMMUNITY VARIATION



PREMISE 3. COMMUNITY VARIATION

DRAMATIC VARIATIONS AMONG CALIFORNIA COMMUNITIES WILL MANDATE DIFFERENT EDUCATIONAL RESPONSES WITHIN A COMMON MISSION.

California is known for the extreme diversity—among regions, even among communities—of its population, geography, socioeconomics, and climate. Likely future trends suggest that this variation will continue and may even become more pronounced.

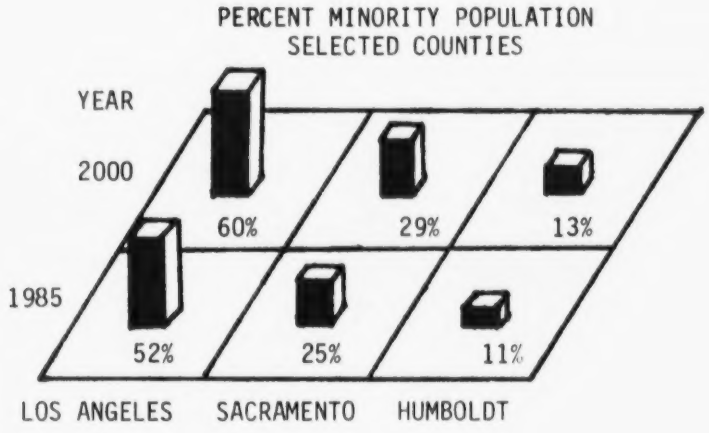
TRENDS

Demographic trends will vary dramatically around the state:

- Along the North Coast (counties of Mendocino, Del Norte, and Humboldt), non-Hispanic Whites comprise nine-tenths of the population, a proportion that will not change significantly in the future.

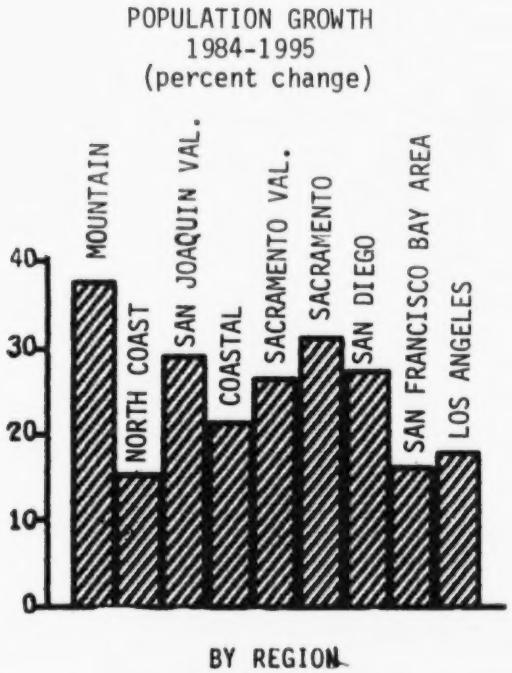
  Los Angeles County is populated by 53 percent non-Hispanic Whites and 47 percent minorities. This ratio will be reversed by the end of this century.

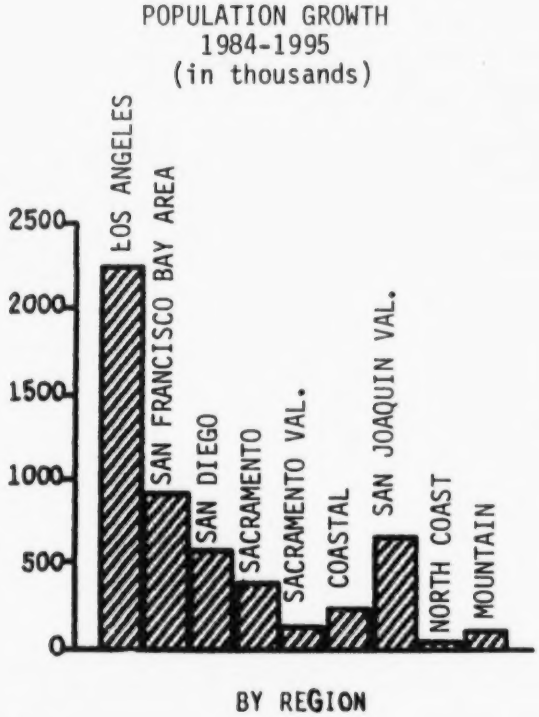
- Currently, one-third of the adults living in Los Angeles County speak a language other than English at home. By contrast, just one percent of the population along the North Coast of the state is in a similar circumstance. Anticipated demographic changes suggest that such community and regional differences will become more pronounced in the future.



- The populations of San Diego and Sacramento will grow at twice the rates expected for the San Francisco Bay Area and North Coast.

Riverside and Solano are the fastest growing of the state's 52 counties. Ten counties will account for three-fourths of the state's population growth during this decade.

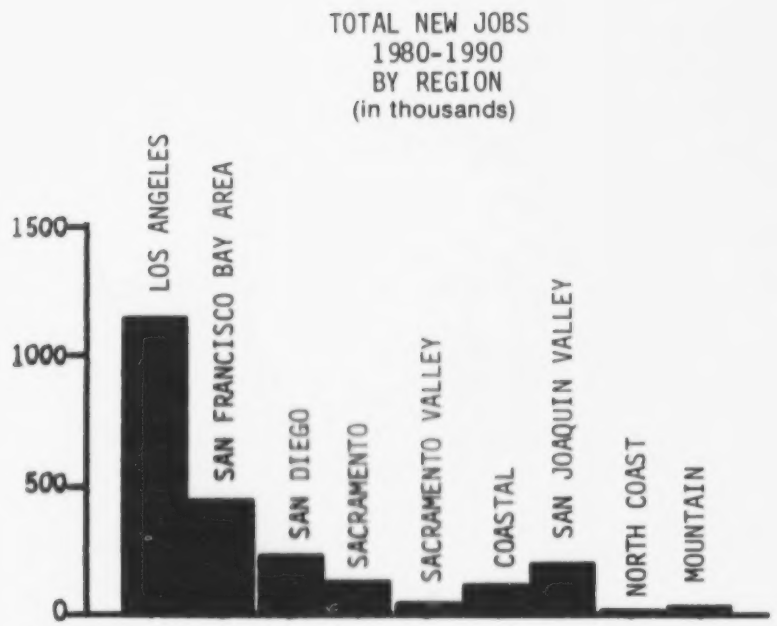




The state also differs with respect to industries and the kinds of jobs characteristic of particular regions. Manufacturing will continue to be primary in the Los Angeles Basin. By contrast, the economy of the North Coast is characterized by lumbering and fishing, with increasing growth in tourism. San Diego, Orange County, and the South San Francisco Bay Area are centers of growth in the high technology industries. The Central Valley, still primarily agriculture, will experience rapid growth in certain high technology industries.

- As measured by total jobs, all economic regions of California will grow faster than the nation as a whole during this decade.
- Two-thirds of the new jobs will be in the Los Angeles Basin and the San Francisco Bay Area, although other regions wil experience faster rates of growth.
- Like population, the number of jobs in San Diego and Sacramento will grow by nearly 30 percent this decade, while the growth of jobs in the San Francisco Bay Area and North Coast will be half that figure.
- Dispersion of jobs and people throughout more remote regions, induced by advancements in communications, appears to be a longer-term phenomenon.

  The high-technology concentration of the south Bay Area is just beginning to spread along freeway corridors into the Central Valley and into the coastal valleys.



IMPLICATIONS

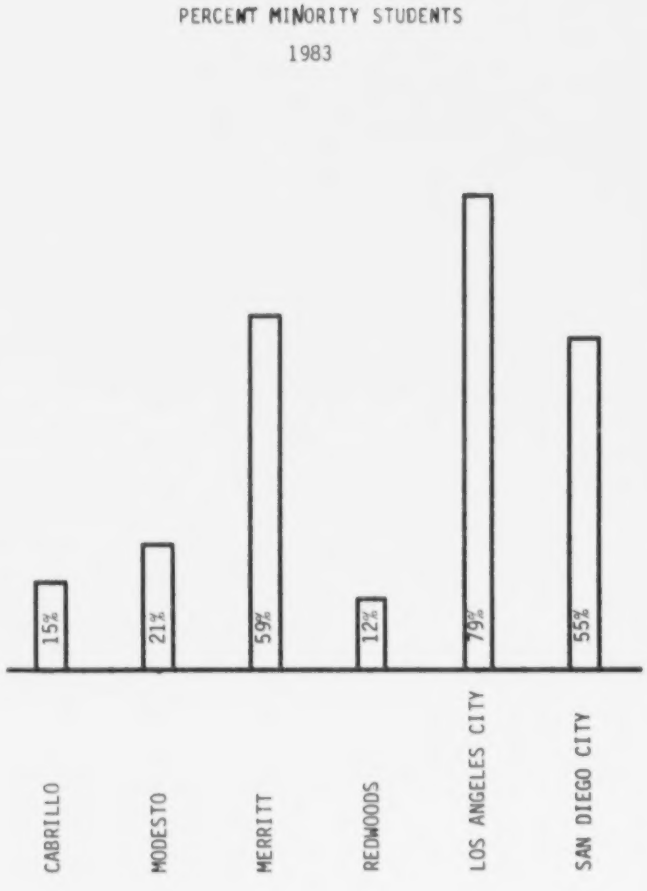
F. COMMUNITY COLLEGE PROGRAMS AND SERVICES SHOULD REFLECT LOCAL VARIATIONS CONSISTENT WITH STATE INTERESTS.

This report describes the implications of trends for community colleges largely from a statewide perspective. One of the more important statewide interests is the recognition that programs in individual colleges must vary according to differences in the needs of individuals residing in the colleges' service areas.

Characteristic of the state's diversity, the program balance of an individual community college will reflect the relative emphasis that college places on various of the components of its mission. Local and state planning should reflect this diversity of emphasis.

Community colleges must develop curricula and support services suited to the needs of students and industry of their service area, whether that area is a geographically small, but populous, inner-city community or a large, but thinly populated, rural region.

Also important in a college's planning are the capabilities of other postsecondary educational institutions in the area. These capabilities differ from one area to another, largely due to historical precedent. For instance, community colleges in San Francisco and San Diego conduct virtually all of the noncredit postsecondary



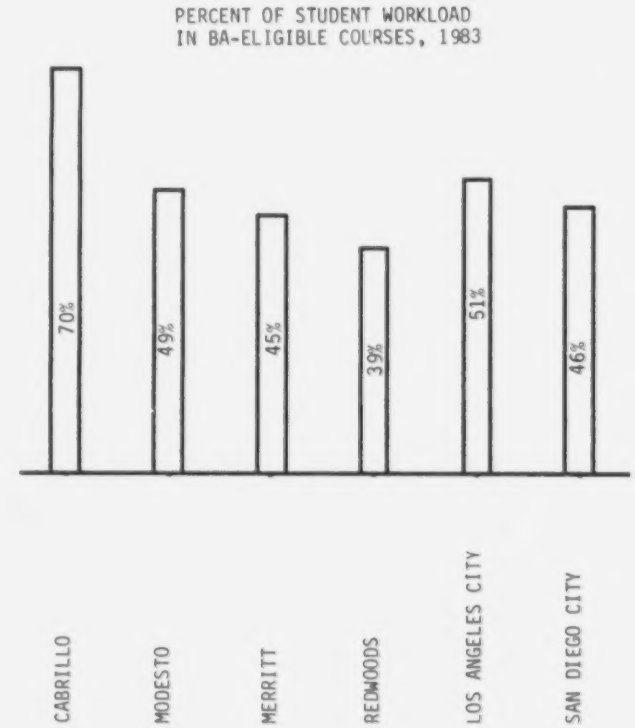
education of adults in their communities. In Los Angeles, by contrast, secondary adult schools and regional occupational centers perform this function.

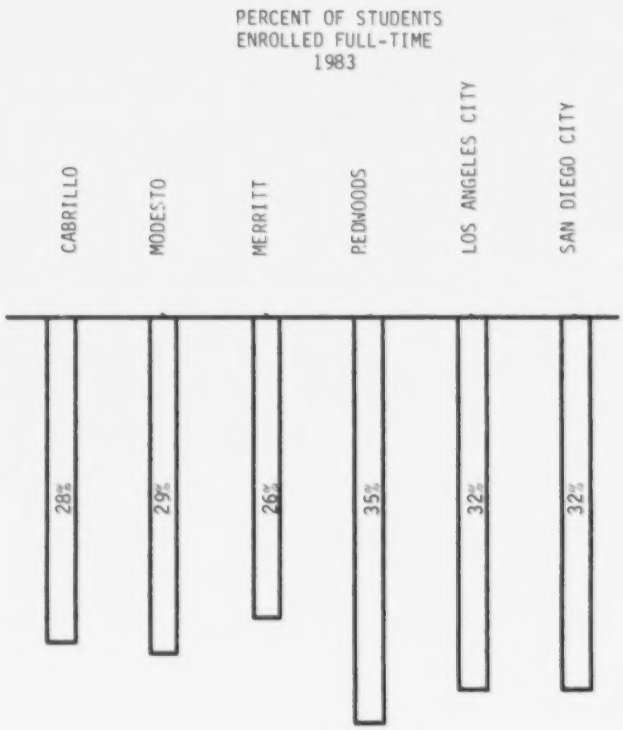
Community colleges also vary dramatically in their balance of occupational and transfer education. At Los Angeles Trade-Tech, 17 percent of the instruction is in baccalaureate-eligible courses. By contrast, the same courses make up 71 percent of instructional activity at Diablo Valley College.

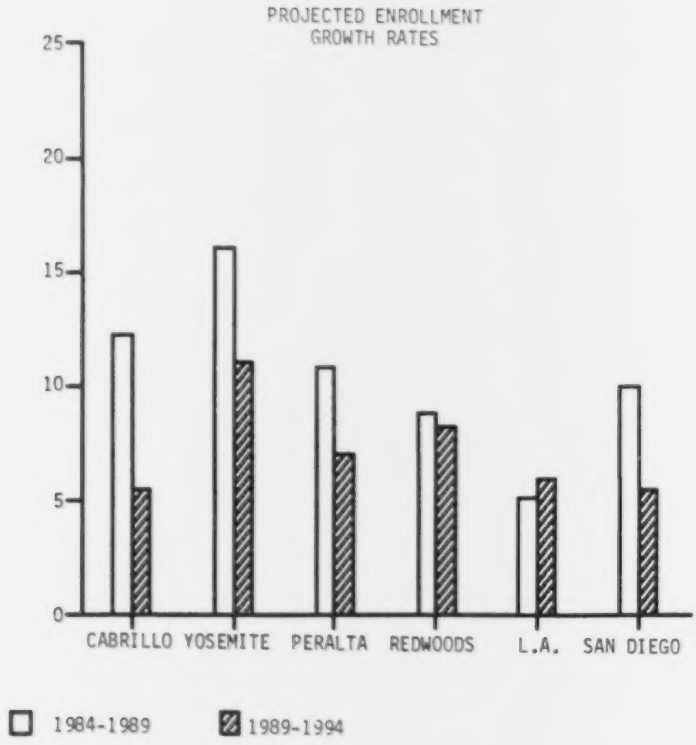
Even the need for colleges to offer community services differs. The San Francisco Community College District is located in a city abundant with art, music and other cultural activities. The district's responsibility to offer community services in San Francisco, therefore, is substantially different than it is in a community like Susanville. There, Lassen College is the community's primary source of cultural activities.

As a result of diverse local trends, community colleges will become more heterogeneous if they are permitted to respond effectively to increasingly diverse educational needs. Thus, the colleges will expand not only in terms of their numbers of students, but also in the diversity of their programs and services. The balance of instruction and related services offered by a community college will increasingly depend upon the needs of that college's service area and the capabilities of other educational providers located nearby.

Colleges located in areas of growth, such as the eastern Los Angeles Basin, Sacramento Valley, and Ventura, will require additional construction. Districts like Los Angeles and many others in the inner cities, with older campuses and little expected growth, will face substantial remodeling, maintenance, and equipment







replacement needs. Many of these older colleges are also experiencing large numbers of faculty retirements and the need to hire new staff during this decade. For others, the height of this activity will not occur until the 1990s.

Population shifts will be increasingly important to curriculum planning. Recent concentrations of Asian immigrants in San Diego, Orange County, and the southern San Francisco Bay Area, have led local colleges to establish programs in English as a second language of the sort long provided by San Francisco. Growing Hispanic populations in Southern California have a similar impact. While most Hispanic growth will continue to be in the southern part of the state, the location of future growth in Asian populations is less certain.

The existance of other educational providers also influences the curriculum. Potential students in Los Angeles and Sacramento who are assessed to possess low English language skills can be referred to adult schools with the expectation that they will be adequately served. This is not generally true in San Francisco, Orange and San Diego counties.

Changes in industries and jobs that define a labor market also will vary dramatically across the state. Effective curriculum planning should anticipate these changes and incorporate also an idea of the mobility of program completers—they frequently move from one area to another to seek jobs.

THE INFORMATION AND TECHNOLOGY REVOLUTION

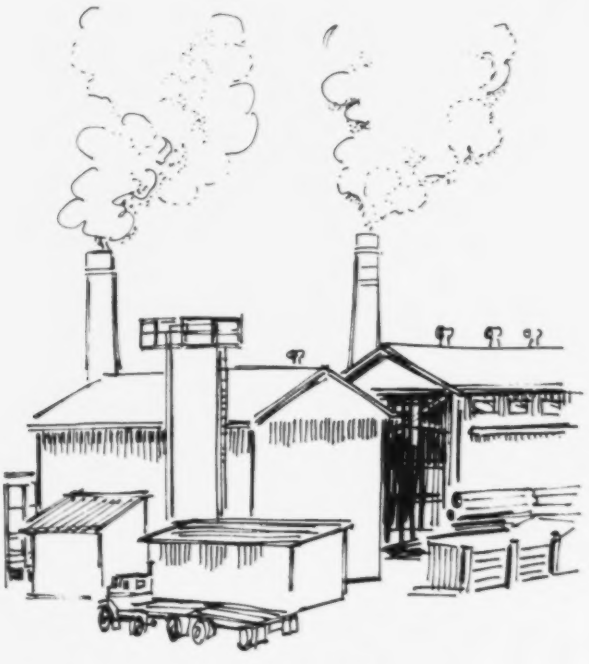
PREMISE 4. THE INFORMATION AND TECHNOLOGY REVOLUTION

THE REVOLUTION IN INFORMATION AND TECHNOLOGY WILL TRANSFORM WHAT, WHERE AND HOW PEOPLE LEARN.

The style and content of education that California's adults undergo will continue to change while the responsibility for this task continues to be shared among many educational and noneducational institutions.

Californians will experience postsecondary education in a greater variety of ways.

- Informal educational experiences will continue to become a larger part of an individual's education.
- Postsecondary education will be supplied increasingly by new providers: corporations, public agencies, and other institutions.
- Four-year higher education institutions train 8 million and two-year colleges train 4 million students each year. Business currently trains 8 million individuals each year. This pattern of literally bringing education to the job is expected to continue and expand.
- The armed services train an unknown additional number of individuals who are within the traditional college-going age groups.



Technological change will increasingly alter the way Californians work.

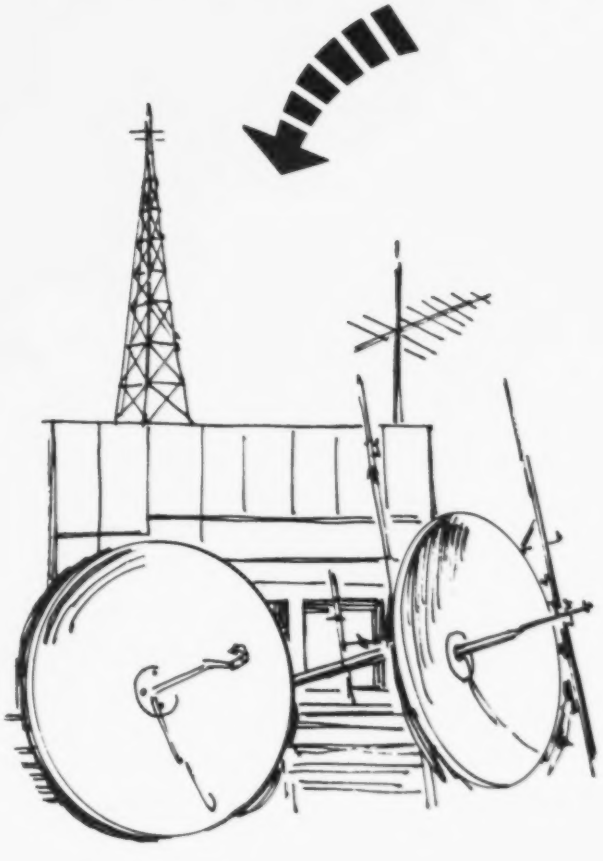
- Some apects of the future job market are relatively certain:

  - Manufacturing will continue to account for nearly two-fifths of the nation's economic output into the 1990s as "smokestack" industries (steel, auto, mining, etc.) are replaced by high-technology manufacturing in electronics, computers, plastics, aircraft, and other products.

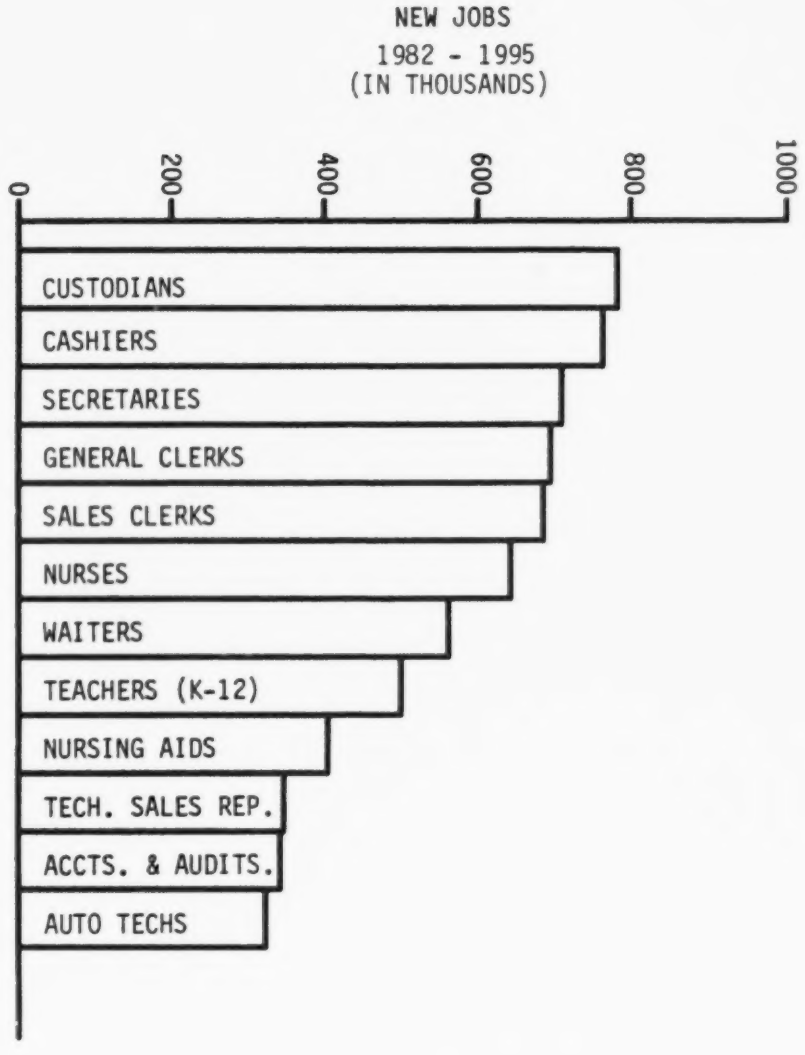
    However, the number of jobs in manufacturing will increase by only five percent through 1995 because automation will enable manufacturers to produce more output with fewer employees.

    About 13,000 robots now operate in American factories. By 1990, it is estimated there will be over 50,000.

  - Non-manufacturing jobs will increase by over 40 percent during the next ten years. The largest gains in jobs will be in the service industries where skills largely involve communications and information processing



- While the percentage increase in high technology jobs will be great, the numbers will be small and most job opportunities will arise in occupations that already exist:

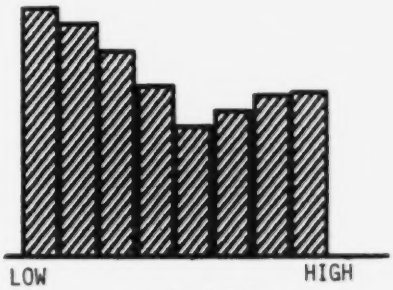


- On other future job trends there is disagreement. A number of analysts predict that:

  - Because of automation and the dramatic shift from a self-contained industrial economy to a globally-interdependent information economy, there will be relatively few high-paying professional jobs, and many low-paying service jobs, and little in-between. The number of middle skill, "blue collar" jobs will decline.

  - During this decade, the number of jobs and the labor force will increase by one-fifth. The number of unemployed in California may increase by as much as ten percent.

JOB DISTRIBUTION
IF "BLUE COLLAR" DECLINE

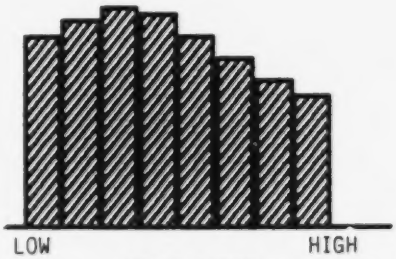


- In contrast, other analysts predict that:

  - The skills required in jobs are increasing and decreasing at the same time as a broad range of technologies take hold and, therefore, the general future distribution of skills may be much the same as today.

  - With the maturing of the baby boom generation, more workers will be leaving the job market than will be entering and there will be a labor shortage before the end of this decade.

JOB DISTRIBUTION
IF NO CHANGE FROM TODAY



Developments in telecommunications will accelerate:

- Despite some delays, more than one-third of all television homes are connected to a cable system and the number is increasing.

- Stationary orbit satellites are revolutionizing telecommunications and eventually may replace cable systems.

- It is possible that as early as 1990, direct broadcast satellites will make vast quantities of information available to most households.

- Videodiscs, cassettes, and videotext home information systems will provide learning resources with enormous implications for both formal and informal education.

Developments in computers are even more dramatic:

- Despite a temporary decline in sales during 1984, it is projected that one-third of all households will own a computer by the end of this decade.
- Surveys project a ten-fold increase in personal computers and in central processing capability by 1995. The workstation or terminal will be nearly as common as the telephone is today.
- While the number of major software manufacturers is declining, sales of new programs continue to increase. These firms produce programs largely for text editing or word processing, business use (accounting, etc.), entertainment, and education.
- The evolution of silicon chips and related technology will enable smaller computers to process larger amounts of data. Mini- and micro-computers will enable the development of new word and data processing systems.
- Research and development work into the fifth generation of computers, artificial intelligence, has concentrated initially on military uses involving visual sensors and voice-actuated robots. Civilian applications will be forthcoming soon since private firms are investing more on R&D than is the public sector.

IMPLICATIONS

G. THROUGH THE USE OF NEW TECHNOLOGY, COMMUNITY COLLEGES SHOULD PROVIDE GREATER FLEXIBILITY IN THE TIME, PLACE, AND CONTENT OF INSTRUCTION TO BETTER SERVE INDIVIDUALS.

While becoming more widespread, informal education tends to be either quite specific (on-the-job training), limited to entertainment (commercial television), or even isolating (home computers). The formal college experience, where students and faculty interact and where individuals seek a more general and basic education, should become increasingly relevant in a future where social values, as well as technology and other material factors, are apt to change at an increasing rate.

As noted, technological and demographic changes will affect the way Californians live and work during the remainder of this century. Thus, the kinds of potential students and their needs will change such that their enrollment may be limited by barriers of culture, time, and physical location.

The future student population more often will be low income, self-supporting, and working. Increasingly, these students will be heads of households with dependents. And, as noted above, they will more often be older and of Hispanic and Asian descent.

These individuals may not enroll if confronted by long commuting distances or if work or lack of child care interferes with the class schedule. Some individuals may be discouraged by formal aspects of the traditional campus atmosphere. While they are familiar concepts, seldom-used times of the day, course lengths of other than the usual term, and off-campus locations may be needed more frequently in the future than in the past.

Community colleges are leaders in taking education to their communities in off-campus locations and in the evening. In general, future program expansion should be accommodated in remodeled or altered facilities on campus, or by making greater use of community facilities. Except for colleges in rapidly growing areas, new, on-campus construction is expected to be the least likely means of housing future expansion.

The new learners will be helped most by the college that is able to integrate class instruction, learning resources (such as the media center or language laboratory), and student services (such as counseling) into an effective educational program.

The instructional technique should be based upon an effective diagnostic evaluation of each learner. The kinds and capabilities of students should dictate the choice between, say, large and small group instruction.

H. CURRICULA SHOULD GIVE GREATER ATTENTION TO THOSE SKILLS INVOLVED IN SERVICE, COMMUNICATIONS, AND INFORMATION INDUSTRIES.

Interrelationships between general and occupational education need to be explicit. Those students trained for jobs need to be literate and those trained in lower division general education should be knowledgeable about emerging technologies and expected changes in the world of work.

How community colleges can best educate students for future changes in the labor market isn't totally clear. Despite conflicting forecasts, however, it seems clear that business, computer and information science, and health professions, now half of all occupational curricula, will need to receive even greater emphasis in the future.

Community colleges also need to teach people how to access and synthesize what is useable of the vast quantity of information that will be available. This includes the means of public access to the findings of research into new technologies.

Curricula should be developed for groups of students with common learning goals. Colleges may need to expand the two-year curriculum, noting differences in community need and the existence of other providers.

I. COMMUNITY COLLEGES SHOULD MAKE GREATER USE OF INFORMATION TECHNOLOGY IN INSTRUCTION AND STUDENT SERVICES.

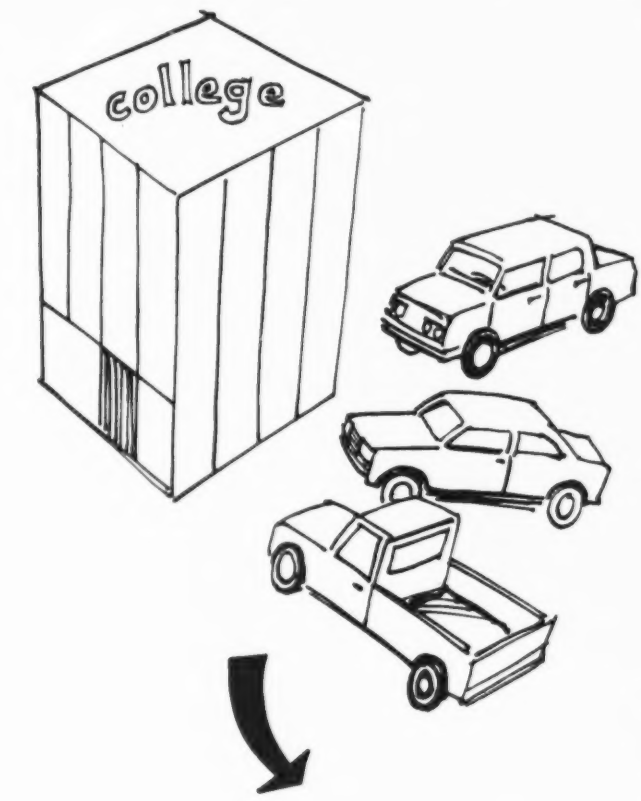
Dramatic changes in information and communications technology will require dramatic changes not only in the curriculum but also in the way in which community colleges educate students.

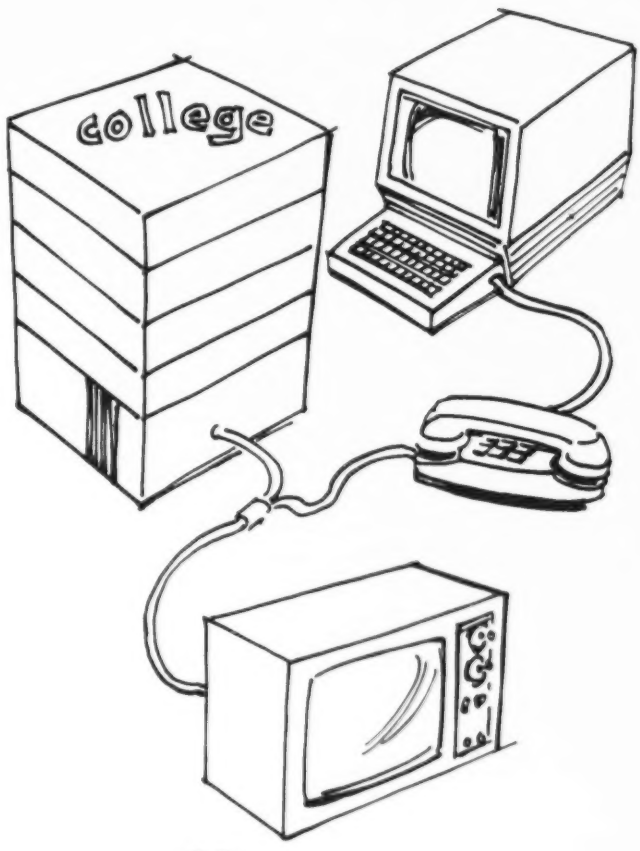
Experience shows that many of the new technologies are useful for supplementing the centuries-old methods of lecture and laboratory instruction and for streamlining necessary instructional support services such as registration, advisement, and performance documentation. Indeed, the "commuting" community college may become the "communicating" community college by the end of this century.

Broadcast television has provided dramatic examples of quality and cost-effective use of instructional technology. Fewer examples of cable television exist, although (because of feedback capability) it provides a greater range of instructional possibilities.

The full potential of computers in the community college also is far from realized. Use of this tool is not prevented by technology or by student willingness, but rather by lack of either software, staff expertise, or incentives for experimentation and development.

If accompanied by policies that are sensitive to the human condition and by appropriate quality controls, television and computers may be the way of extending community college education to California adults who otherwise would not be afforded access.





J. PARTNERSHIPS AND ALLIANCES WITH BUSINESS AND INDUSTRY WILL BE ESSENTIAL FOR CERTAIN COMMUNITY COLLEGE PROGRAMS.

Rapid changes in the technology of many industries—especially in computer-assisted design (CAD), manufacturing (CAM), and information processing—makes large capital investments in community college buildings and equipment impractical. College students cannot be expected to train on "third generation" equipment, only to find they must operate "fourth generation" equipment when beginning their careers. Therefore, it appears that community colleges must seek to collaborate more with business and industry in order to keep up with the state-of-the-art.

This collaboration ought to include arrangements where specific student training in job skills takes place at the job site, while more general training in the liberal arts, humanities, and communications skills would take place at the campus. This is analogous to long-standing models of cooperative work-experience education.

QUALITY IN THE CONTEXT OF CHANGE

PREMISE 5. QUALITY IN THE CONTEXT OF CHANGE

PUBLIC CONFIDENCE IN EDUCATION WILL DEPEND NOT ONLY ON QUALITY PROGRAMS, BUT ALSO ON EVIDENCE OF THEIR EFFECTIVENESS.

The concern for quality, currently at the forefront of American thinking, has resulted in recent national studies on the effectiveness of secondary and postsecondary education. This concern about the quality of education is expected to continue and is particularly important to community colleges.

The likely enrollment of greater numbers of underprepared students in the future means that community college programs must be rigorous and of high quality.

TRENDS

- Due to increased competition for students, particularly the traditional 18 to 24 year-old, only those postsecondary education institutions that demonstrate program quality and relevance will be able to maintain their vitality.

- The number of California high school graduates will fluctuate to a low of 250,000 in 1990 then increase through the year 2000.

  More of these high school graduates will be from minority racial and ethnic backgrounds. Aside from Asians, these students are less often eligible to attend a four-year institution directly from high school than are non-Hispanic White students.

- It is possible that recent declines in the persistence of high school students will continue.

- In 1988, high schools will increase their graduation standards to include more course requirements and tests of competencies.

- Even though the secondary schools are upgrading the quality of instruction, this may have little impact on the general preparation of community college students since

  - much of the state's growth in educational demand will be among those already beyond high school age.

  - effective reform will be difficult because of the scarcity of faculty, particularly in mathematics and science, and because more of the high school students will be learning English as a second language.

- Beginning in 1988, the State University will increase its admissions standards to a level more like that of the University by requiring that specific subject areas be taken in high school.

- As four-year institutions become more selective in their general admissions and program requirements, community colleges may be required to enroll greater numbers of adult learners with English language, mathematics, and other deficiencies.

- Virtually all of the enrollment increase in community colleges over the next decade will be made up of part-time students.

  More of the future part-time students will possess limited language and computational skills and less prior education than is the case at present.

- One in five adult Californians is illiterate; that is, reading and writing below the third grade level. Without a significant change in the state's current policies on education, this ratio is likely to increase.

- Secondary Adult Schools and Regional Occupational Programs currently enroll one million Californians in basic skills, English as a second language, and job training programs. The ability of these schools to effectively serve greater numbers of the new students and those with recurring needs will be constrained by lack of support services such as counseling and financial aid.

IMPLICATIONS

K. COMMUNITY COLLEGES SHOULD PREPARE FOR MORE DIFFICULT CHALLENGES IN PROVIDING TRANSFER EDUCATION.

Recent studies demonstrate that community colleges have trained and transferred to four-year institutions a remarkably consistent proportion of those students for whom transfer is a realistic and desired goal. Moreover, these transfer students perform as well in upper division as do those students of like ability who begin their work as freshmen at a four-year campus.

It is likely that community colleges will face an expanded and more difficult task in transfer education because of the expected demographic trends and because of more exacting high school graduation standards and increased State University entrance requirements.

The raising of high school standards, if not accompanied by parallel improvements in instruction, will lead to relatively higher drop out rates, particularly among Blacks and Hispanics. New subject area requirements at the State University will force a number of students, who today would attend a State University campus as freshmen, to begin their work at a community college. One result of such policies is that community colleges will enroll even greater numbers of underprepared students. At the same time, the community college role in transfer education becomes more important and more difficult, especially in attempting to overcome the underrepresentation of Blacks and Hispanics who most often begin their baccalaureate work at a community college.

L. EXPLICIT COMPETENCIES SHOULD BE EXPECTED OUTCOMES OF INSTRUCTION.

The educational response to an increasingly diverse and underprepared clientele can and must be one of high standards. One means of solving this apparent dilemma is greater concern for specific competencies.

Tests to measure competencies should be geared to the appropriate teaching level, whether that be pre-collegiate or lower division. Standards for measuring student achievement need to be high, but with greater focus on effective instructional methods to achieve those standards.

To avoid cultural or language bias, assessment of competencies would include a wide variety of techniques: interviews, performance examinations, and review of experience, in addition to standardized tests. Assessment must diagnose educational needs, not just measure language or computational capabilities.

The associate degree, a traditional measure of academic success, should reflect the achievement of collegiate-level competencies. All students completing the required work and achieving the specified competencies would be awarded the degree. And, as these competencies become better understood by employers and other institutions, the degree will become a more meaningful academic goal.

M. COMMUNITY COLLEGE EFFECTIVENESS SHOULD BE MEASURED BY WHAT STUDENTS LEARN AND HOW THEY USE IT.

Community colleges will need to improve the quality of resources and the way they are allocated to the education of students whose needs pose increasingly more difficult challenges. Only through rigorous evaluation of learner outcomes, however, can colleges monitor future changes in the quality of their work and determine if, in fact, they are becoming more effective.

Results of outcome-oriented evaluation lead to the decisions which should improve the learning process. In addition, these data can be aggregated and provide the basis for assessing the performance of a college or for assessing the overall performance of all colleges in serving major public educational interests. The recent report by the National Institute of Education panel on excellence in higher education recommends that measures of student growth and development be used as indicators of institutional and programmatic excellence.

In a learner outcome-oriented evaluation, information is collected about changes in student attributes such as values, skills, and knowledge, along with consequent behavior such as employment, voting, and public service. At the same time, the normal individual maturation process (whether in college or not) and socioeconomic changes may be statistically controlled in an effort to identify and isolate the specific impact of community college education.

Follow-up work with students can serve several purposes. The information gathered on student progress and performance ought to be aggregated as one means for determining the relevancy and quality of programs and, ultimately, improving instruction. Equally important, this information can be fed back to the student for the next round of academic decision-making.

N. STUDENT NEEDS AND CAPABILITIES SHOULD BE MORE ACCURATELY DETERMINED AND BE AN EXPLICIT PART OF INSTRUCTION AND STUDENT DECISIONS.

Students should be assessed on entry, during their college work, on exit (from the college), and into later activities. Much of this information will be forthcoming from further work in student assessment, advisement, and follow-up. Consequently, there needs to be continued improvement of such support services, especially if community colleges are to continue their policy of open admissions.

Support services of this kind, however, have been devoted largely to students attending full-time (taking 12 or more credit units). At present, one in four students carries a full-time load. This proportion of full-timers could fall to one in five during the 1990s.

Assessment, advisement and follow-up activities with part-time, as well as full-time students need to be substantially improved. Most part-time students are enrolled to obtain occupational skills, many for basic language and computational skills, and a few with the intent to transfer. The needs and capabilities of these students should be accurately assessed and they should be assisted—outside, as well as inside, the classroom—if their community college education is to be productive.

It also is essential that students be closely monitored to see if they are making progress toward their objectives.

Improved advisement early in a student's college experience should inform that student of the relevant options, not foreclose those options. Informed student choices will be more consistent with career objectives than uninformed choices. There needs to be careful consideration before designating those courses in which students are "placed" as opposed to those which students may "choose." Equal opportunity means access to the college, but not to courses for which students are not qualified.

O. IN COOPERATION WITH OTHER INSTITUTIONS, COMMUNITY COLLEGES SHOULD ASSUME APPROPRIATE RESPONSIBILITY FOR IMPROVING ADULT LITERACY AND LEARNING SKILLS.

Community colleges and other postsecondary education institutions will face an increasing responsibility for providing adults with courses in developmental English, English as a second language (ESL), and other language and learning skills often taught at a precollegiate level.

In coping with this responsibility, the colleges' priority should be on instruction that is aimed at getting people ready for collegiate-level education, either for advanced study or for employment.

Besides a possible shift in instructional emphasis, there also will be an impact on student support services.

These activities may require more staff-intensive contact with students than does work with those students who are proficient in English or more experienced in formal education. Increased instruction in developmental skills, remediation, and ESL can lead to an increasing need for small classes, tutoring, and more out-of-class support such as student assessment, advising, and follow-up.

Preparing a highly-motivated and intelligent, but precollegiate (in English proficiency) student to be a productive and contributing citizen involves a variety of levels of education. This doesn't mean, however, that the standards of achievement for this instruction are any less demanding than those of the lower division training of an experienced (in formal education) high school graduate who plans to transfer and pursue a baccalaureate degree. It is simply a different set of standards. Indeed, instructing the underprepared student may present more of a challenge and require greater resources than the instruction of a typical transfer student. The community college should maintain high standards for the education of all its students.

The content and mode of instruction for the underprepared and culturally-different students should be tailored to their individual needs. For instance, faculty should be aware of the different preceptions that different cultures have of education and, specifically, of teachers. Whenever possible, perhaps through new teaching technologies, instruction should be individualized for students or groups of students. Self-paced, open-entry, open-exit courses will, in many instances, be the most effective techniques.

INSTITUTIONAL RENEWAL

PREMISE 6. INSTITUTIONAL RENEWAL

INSTITUTIONAL RENEWAL WILL BE AN ESSENTIAL RESPONSE TO RAPID CHANGE.

Numerous external changes, together with increasing concerns about management and coordination, staffing problems, and aging facilities call for efforts by community colleges at institutional renewal.

TRENDS

Management and coordination are important factors in institutional renewal.

- Public concern over the quality of education will continue with increased focus on postsecondary education.
- Education will be viewed more as a continuing process which requires cooperation by those institutions (elementary, secondary, postsecondary) that influence an individual's development.
- Essential for institutional renewal, new forms of governance will emerge at the college and state levels that are both more coherent and participatory.
- Rapid technological and social changes demand more effective planning. Improved information technologies will facilitate such planning.

Besides management and coordination, institutional renewal must address staffing.

- More than one-third of the full-time faculty (over 5,000 individuals) are over 50 years-of-age and will retire prior to the end of this century.

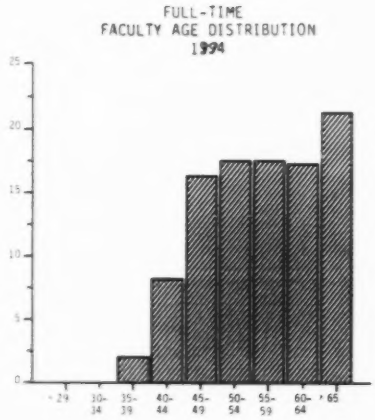
- Minority students constitute 36 percent of enrollment, while 14 percent of all faculty are minority. This gap may widen as students become increasingly diverse.

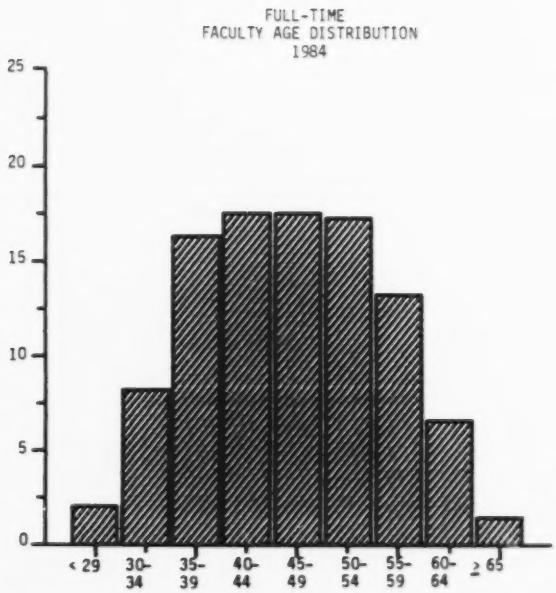
- Also affecting the need for staff renewal are:

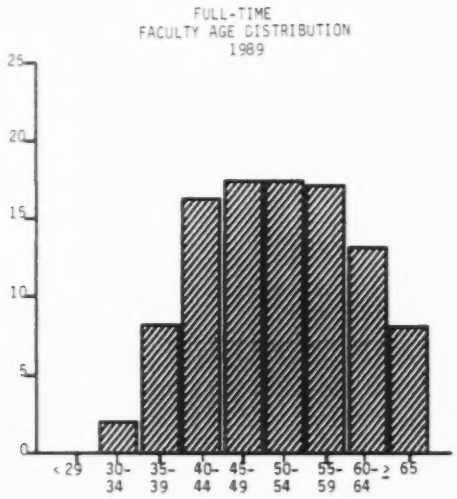
  Rapid changes in instructional technology.

  A continuing knowledge explosion.

  Renewed attention to standards of excellence.







California community colleges conduct their activities on 106 college campuses and at numerous other centers and locations throughout the state. These facilities house 31,420,000 useable square feet of space and are valued at $3.3 billion.

Facilities and equipment are becoming increasingly obsolete:

- Two-fifths of the community college lecture and laboratory space are in facilities that are over 20 years-of-age.

  Forty-two percent of supporting facilities are over 20 years old.

- By 1995, two-fifths of community college facilities will be over 30 years old.

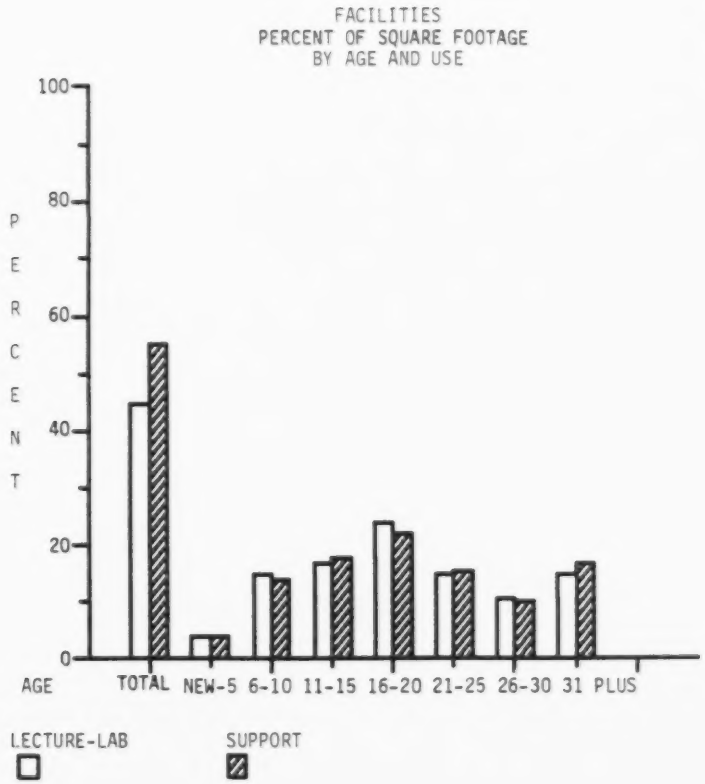
- Recent study of equipment used by community colleges in occupational instruction shows:

  67 percent "somewhat or seriously out-of-date"

  29 percent "almost up-to-date"

  4 percent "state of the art"

- Expected changes in the curriculum and in educational technology will increase the need for remodeling, alterations, and equipment replacement.



IMPLICATIONS

P. THE PRIORITIES AND PROGRAM BALANCE WITHIN THE COMMUNITY COLLEGE MISSION SHOULD BE REVIEWED CONTINUOUSLY AS THE EDUCATIONAL NEEDS OF SOCIETY CHANGE AND INSTITUTIONAL RENEWAL TAKES PLACE.

Between the 1960 Master Plan for Higher Education and the current Master Plan study, the broad mission of community colleges was reviewed only once, in the early 1970's. During this 25-year period, society and the colleges underwent changes that were never contemplated in 1960.

If the community colleges are to be effective and relevant, their response to changing societal demands should be the result of conscious decisions about priorities and programs. The overall mission of an institution changes only gradually over time, but the priorities and program balance within that mission change dramatically in the face of ongoing efforts at institutional renewal.

Institutional renewal is a strategic process that involves assessing the educational needs of a college's service area, the institution's responsibilities as a part of postsecondary education, and the capabilities of its staff and facilities for responding effectively to changes in community and regional educational needs. Renewal will be stimulated by an expanding educational marketplace, giving new importance to articulation with nontraditional providers such as business, as well as with the traditional secondary and postsecondary institutions. Changing knowledge and modes of learning also will stimulate the need for renewal of programs, facilities and staff.

Q. COORDINATED PLANNING AMONG THE BOARD OF GOVERNORS, COMMUNITY COLLEGES, AND THE ACCREDITING COMMISSION SHOULD BE STRENGTHENED.

Incoherent and piece-meal planning leads to ineffective community college leadership. Coordinated planning relies on information and comparable data about institutional characteristics and the outcomes of student efforts. State planning and reporting should be cycled with institutional planning and the self-studies conducted for nongovernmental accreditation.

The evaluative activities of accreditation and state reporting should be coordinated in order to minimize the cost of gathering information and performing analyses.

More effective evaluations can be used to improve instruction and the planning and management of colleges. The accreditation follow-up, where solutions to current problems are identified and implemented, should be an integral part of any planning process.

Planning also should be based on future studies in light of the rapidity of social and technological change. This underscores the need for an accurate data base which is readily available to institutions, constituency groups, and state agencies.

R. COMMUNITY COLLEGES SHOULD SEEK TO IMPROVE COOPERATION AND ARTICULATION AMONG THOSE INSTITUTIONS THAT PROVIDE EDUCATION.

As a continuing process, education should be coordinated across institutional levels in order to maximize the overall development of students. The new educational marketplace, with many more options for learners, will challenge traditional networks of articulation. This is particularly true of training and education programs in the private sector which will become increasingly competitive because of the cost of high-technology facilities and equipment. New models of contract learning will be needed to link community colleges to the private sector. To the extent that specific technological training is done on the job, community colleges must prepare students in the "big skills" such as communication, computation, analysis, interpretation, and synthesis.

Efforts to strengthen articulation with traditional educational institutions also should be expanded. High school students should be made aware of what will be expected of them in various community college programs. Likewise, community college students should be aware of what they need to take in lower division, the performance required for transfer, and what will be expected of them in upper division after transfer. All three institutions should share information on those methods of instruction and counseling that do and don't work well.

Students will bring knowledge of values and general topics from experiences with new sources of learning in the home, the community, and the media. Thus, community college programs must be coordinated with the informal knowledge base of students.

S. INCENTIVES SHOULD BE PROVIDED FOR PROFESSIONAL DEVELOPMENT.

The community college's human resources or staff are the key to institutional resilience, response to change, and the search for excellence. The development of these human resources is an important challenge facing college executive, trustee, and faculty leadership.

Emerging concepts of mission, services, and programs require new roles and tasks for community college staff members. In particular, student service, instructional and media technicians, para-professionals, tutors, developmental education specialists, and management specialists will continue to be needed.

Changes in the role and function of staff will be of a magnitude that exceeds present professional development and renewal processes. These processes tend to be mostly self-started and conveyed by motivated individuals or episodic at the institutional level. Trainers of trainers need to be developed, along with policies for retraining leaves, staff exchanges, and instructional development.

T. COMMUNITY COLLEGES SHOULD INITIATE COLLABORATIVE EFFORTS TO PREPARE NEW FACULTY AND ADMINISTRATORS.

The impending retirements of full-time faculty later this decade and in the early 1990's, and the need to hire many new faculty will present colleges with a number of opportunities and challenges.

There will be increasing opportunities for community colleges to begin correcting the imbalance that currently exists between the racial and ethnic characteristics of faculty and of students.

Some of these future challenges are a mixed blessing. On the one hand, replacement of faculty in low-demand curricula may enable colleges to offer a more relevant program balance. On the other hand, obtaining qualified faculty in certain growth areas as business and computer science will be difficult because community college salaries lag behind those paid for comparable skills by industry. Many older colleges already face a crisis in their inability to compete for and hire new faculty.

New policies and practices in staff selection will be necessary to ensure that needed talents are identified and the best qualified individuals selected. As the demands for new faculty and administrators increase, University training programs should be initiated which reflect the specific needs of community colleges, including field experience or internships.

To support new staff training programs, there will need to be assessment of the special talents and skills related to new subject matter and technologies of teaching and management. These assessments should be conducted jointly by community colleges and university centers.

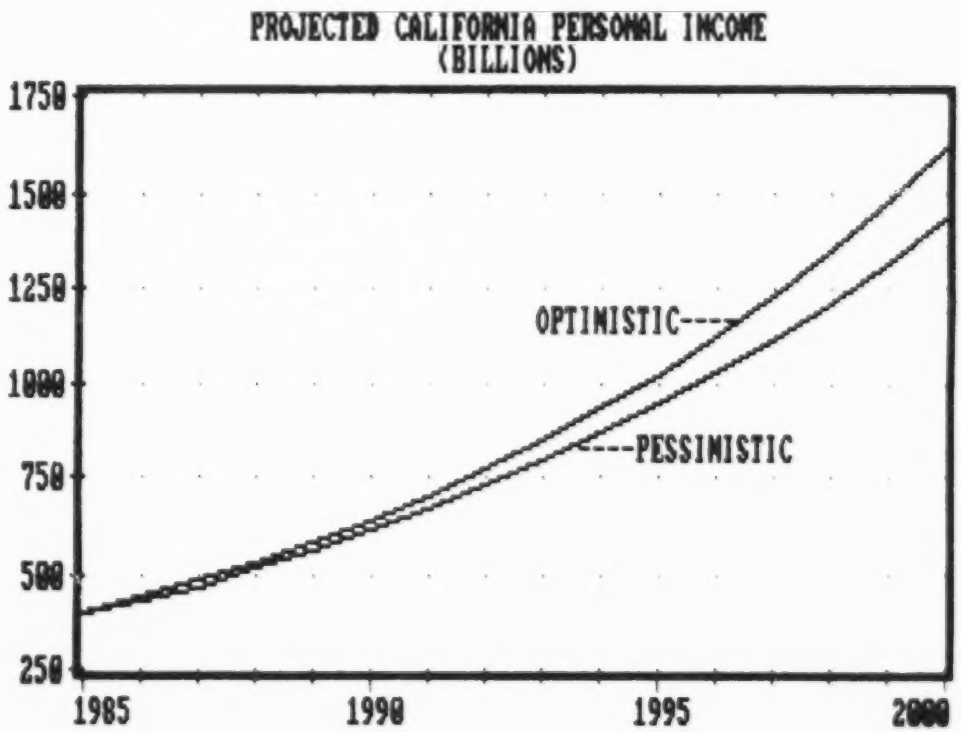
U. FACILITIES MAINTENANCE AND THE UPGRADING OF EQUIPMENT SHOULD RECEIVE IMMEDIATE AND CONTINUING ATTENTION.

Because of their age, a significant number of community college facilities are in need of repair. Current estimates of the cost of these repairs through the end of this decade exceed $100 million. One-third of this amount is for utility and mechanical projects, another one-third for repair of roofs and exterior painting, and the remainder is for a variety of other projects.

Many of these structures are not energy-efficient. While retrofitting can lead to some economies, they are not equivalent to those obtained in new construction.

There also is a need for equipment maintenance, repair, replacement, and upgrading. The combined annual cost of maintaining and replacing college equipment is estimated at between $60 and $70 million. Through 1990, the total cost of this work would amount to more than $300 million.

A STRONG CALIFORNIA ECONOMY



PREMISE 7. A STRONG CALIFORNIA ECONOMY

A STRONG CALIFORNIA ECONOMY WILL CONTAIN ADEQUATE RESOURCES FOR EDUCATION AND COMPETITION FOR THESE RESOURCES BY EDUCATIONAL PROVIDERS WILL INTENSIFY.

Besides affecting the demand for community college enrollment, California's economic conditions determine the level of tax revenues (from levies on personal income, sales, business profits, and property) and, therefore, most of the available financial support for the colleges.

TRENDS

To project the future course of the state's economy and examine its impact on the funding for community colleges, it is necessary to make assumptions about (a) the possibility of external shocks (like another oil crisis) impacting the economy, (b) the federal debt and monetary policy, (c) productivity, and (d) interest rates and prices. From these assumptions, it is possible to project state General Fund revenues, which account for two-thirds of the financial support of community colleges, and local property taxes, which account for nearly one-fourth. In addition, it is possible to estimate the degree to which the state's constitutional (Gann) limit on public expenditures will constrain state and local programs during the rest of this century.

Any projections of California's economy over the next 15 years must be considered speculative, at best. However, by examining probable "best-" and "worst-case" scenarios, we gain a sense of a possible range of revenue levels within which community colleges will be operating.

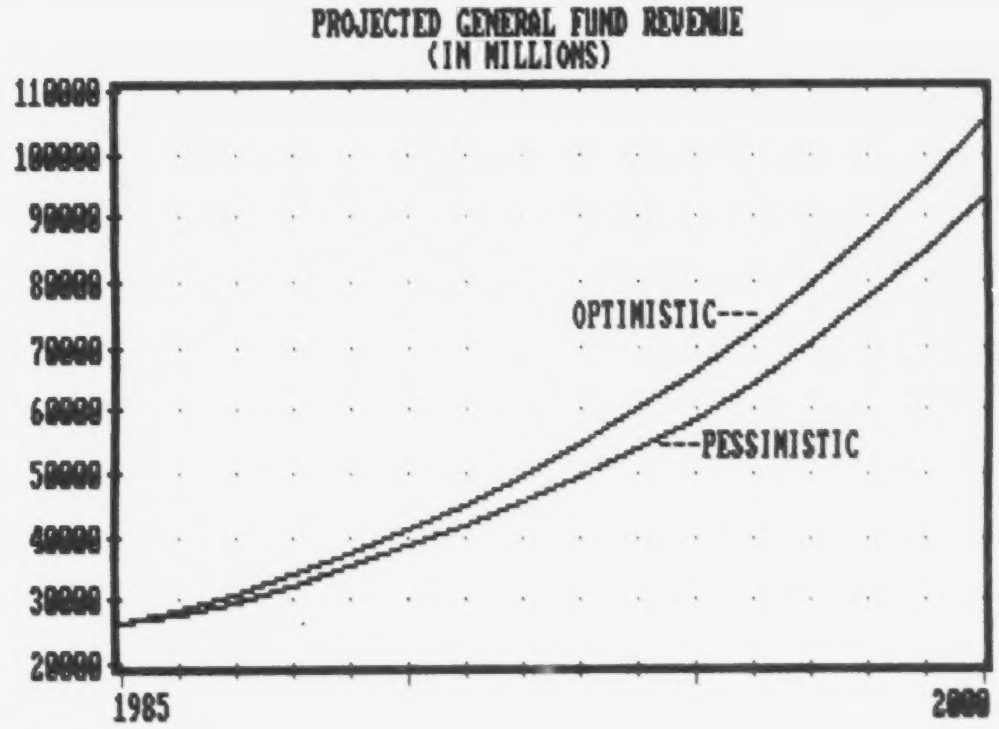
Drawing from projections by the State Finance Commission, two scenarios may be assumed:

ASSUMPTIONS	SCENARIOS	
	OPTIMISTIC	PESSIMISTIC
External Shocks	None	None
Federal Debt	Drops to $118 billion in 1987 and declines as a percent of GNP through 1995.	Exceeds $200 billion in 1987 and declines as a percent of GNP thereafter.
Monetary Policy	Accommodative policy, prime interest rate falls to 9% by 1995.	Initially short term interest rates are two percentage points higher than optimistic scenario.
Productivity	Increases at 3.4% per year.	Increases at 1.9% per year.
Inflation	Averages 5.5% per year.	Averages 5.5% per year.
Property Tax Revenues	Average annual increase of 9.4%.	Average annual increase of 9.1%.
Gann Limit	State exceeds limit beginning 1990–91.	State does not exceed limit.

In truth, both scenarios could be viewed as somewhat optimistic. Neither incorporates external shocks of the sort that resulted from the energy crises of the 1970's or that could result from an international monetary crisis or major California earthquake.

The two scenarios produce General Fund revenues that increase from $27 billion today to between $92 billion and 1,050 billion by the year 2000.

Note the importance of the assumptions. If, for instance, the inflation rate is less and State spending is more than assumed, the Gann limit could be exceeded prior to 1990. Or, if the federal debt is less than assumed, most of the other parameters in these estimates will change.



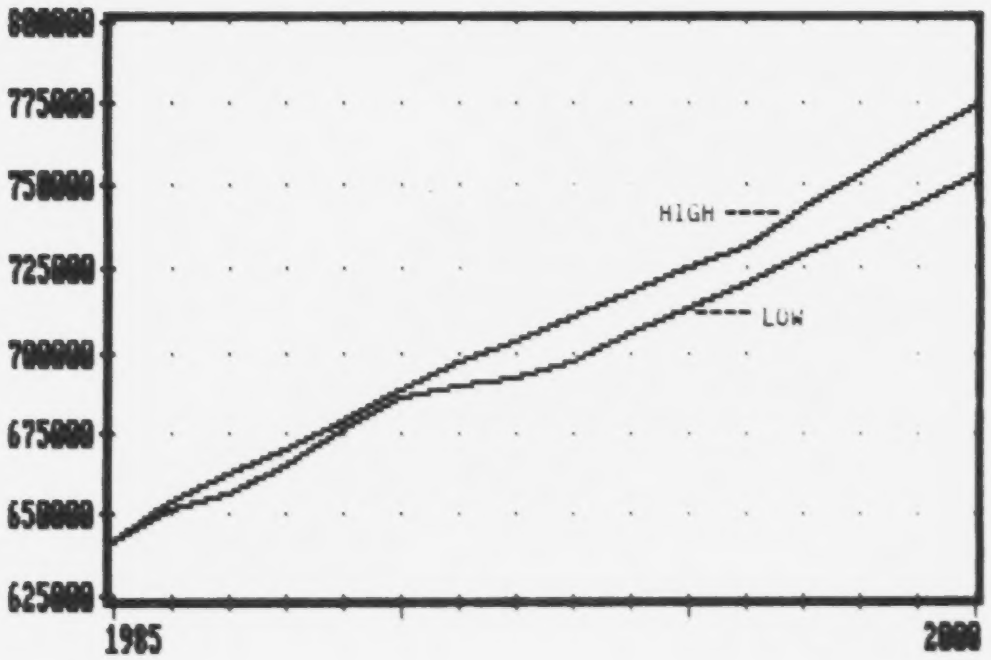
IMPLICATIONS

The implications of these alternative scenarios for community colleges depend upon the college's expenditure requirements. While it's not possible to put an exact cost on the increased demand facing community colleges, it is possible to pose two alternative growth rates for community colleges and contrast the authorized expenditures under each with the alternative revenue scenarios.

The high growth rate would assume that current community colleges' participation rates increase because of future economic and demographic conditions, and that ADA growth is equal to the rate of increase in adult population.

The lower growth rate, projected by the Department of Finance in terms of weekly student contact hours (WSCH) is based on modest changes in current participation rates.

PROJECTED GROWTH RATES IN AVERAGE DAILY ATTENDANCE
CALIFORNIA COMMUNITY COLLEGES



The current funding authorization for community colleges provides for annual increases in inflation and incremental funding for ADA growth (limited by the rate of increase in the state's adult population). Revenues from local property taxes and a general student fee are applied to this authorized funding level and the balance comes from the state General Fund.

A comparison of the two projected funding authorizations for community colleges and the two revenue scenarios for the next 15 years results in four possible cases:

	Average Annual Growth Rates
A: pessimistic revenue	8.9%
high authorizations	7.7
B: pessimistic revenue	8.9
low authorizations	7.5
C: optimistic revenue	9.7
high authorizations	7.7
D: optimistic revenue	9.7
low authorizations	7.5

In all four cases, community colleges require a smaller share of tax revenues during this century:

- College support decreases from 5.9 percent of state General Funds to 4.3 percent in case D and 5 percent in case A by the year 2000.

- Property taxes increase as a proportion of college budgets in all four cases, ranging from a low of 35 percent in case A to a high of 38 percent in case D by the year 2000.

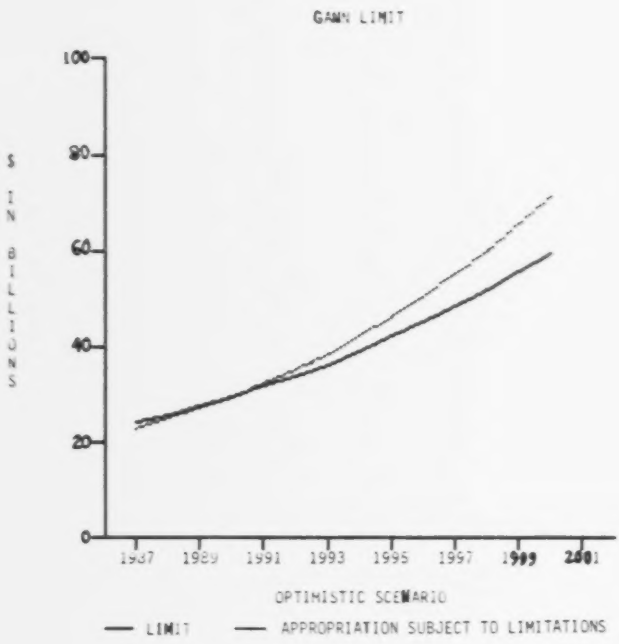
The Gann limit could constrain state expenditures in cases C and D. However, there are legal means to ease this impact and only in case C would community colleges appear to be impacted.

Under these projections, it seems likely that there will be adequate public resources for the support of community colleges during the rest of this century. Community colleges could improve their funding by as much as one-third in case D over the 15-year period without increasing their share of the state General Fund.

Three factors cloud this otherwise optimistic long-term picture:

- There will be increasing competition for tax revenues.

- The need for community college expenditures may exceed that authorized because (a) enrollments and ADA grow faster than the state's adult population, (b) improved funding is needed to support underprepared students and the high costs of teaching high-technology skills, and (c) faculty salaries need to be made more competitive as new hiring increases over the next decade.



- Community college equipment and facilities are in need of extensive replacement and maintenance.

Increasing competion for public resources will come from a variety of sources. Environmental protection, health and welfare, transportation, crime prevention, and other collective needs will continue to expand their use of public funds. The needs of postsecondary education also will expand:

- Due to increasing competion for high school graduates, four-year institutions may attempt also to serve the educational needs of older adults.

- The expansion of new educational providers will be accompanied by efforts on their part to obtain public subsidies.

- Decreasing federal student financial aid will force proprietary and private nonprofit educational institutions to seek increased state-level aid.

- Regular instruction in elementary and secondary schools is expected to increase its requirements from the General Fund by about one percentage-point to nearly 40 percent over the next ten years.

V. REVENUES SUPPORTING COMMUNITY COLLEGES SHOULD BE PREDICTABLE, THEIR USE FLEXIBLE, AND THE RESULTS OF THEIR USE EVIDENT.

In the face of these factors, community colleges not only need to better coordinate their efforts with other providers, but also need to become more effective and more accountable for their efforts to the taxpaying public. Reliable and effective funding can help the community colleges achieve these objectives.

Funding for community college enrollment growth is limited to growth in the adult population. Even under optimistic scenarios, it is possible that the number of unemployed in California's labor force will increase at a rate that exceeds the growth in adult population. Thus, the long-term demand for community college programs and services may exceed that level suggested by the changing number of adults in the state and the funding shortfall could be substantial during periods of economic downturn.

Incremental (marginal cost) funding more effectively supports the cost changes associated with growth or decline in existing programs than does average-cost funding. Incremental funding is deficient, however, for districts adding new, high-cost programs without being able to make compensating cost reductions elsewhere.

College funding needs to recognize the differential costs of various programs. For instance, small-class nursing instruction will continue to cost more than large-lecture instruction in certain of the social sciences.

The timing of revenue allocations should provide the predictability necessary for effective college planning. This predictability may be accomplished by such techniques as multi-year "forward" funding or by equating appropriations with authorizations within a given several-year cycle. Tying funding to planning would also make budgets more predictable.

Dealing with rapid future changes also will require that community colleges have greater flexibility in the way they allocate their resources. This flexibility could include fewer constraints on resource use, more discretionary funding, incentives toward performance that is tied to effectively serving the colleges' communities, and elimination of the competition (for funding) between instruction and student services.

Added flexibility in fund use may be accompanied by an increased need to account for the use of funds. Community colleges need to explain what they do and the results of that work to the Legislature and to the public, thereby justifying their use of the allocated tax revenues. This explanation of the community colleges' benefits to society relies on information about learner outcomes, measuring changes in the knowledge, skills, and values of students. Only in this way can colleges describe the long-term benefits for society of their programs and services.

Nongovernmental accreditation is one effective vehicle for evaluating the results of efforts by individual colleges. The state should supplement these reviews by examining the colleges' performance, in the aggregate, on those broad objectives such as access, transfer education, vocational education, remediation, and the like, that are felt to be in the interest of the general taxpayer.

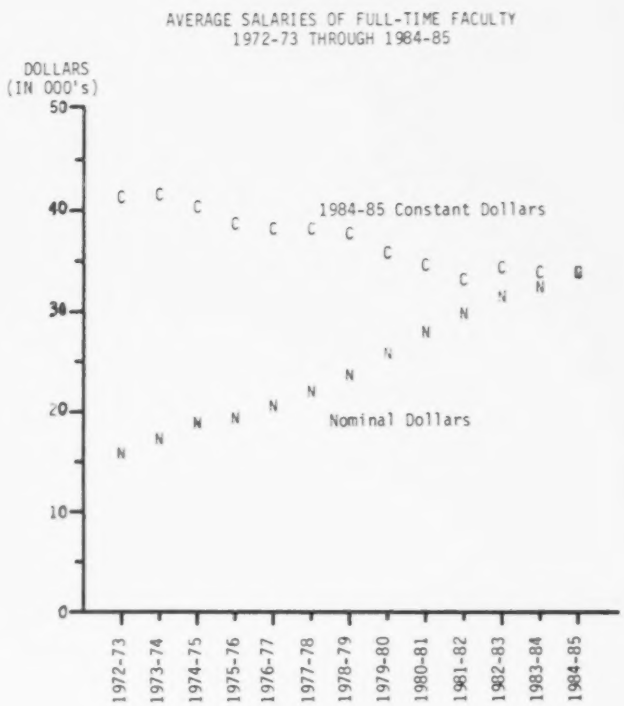
W. COMMUNITY COLLEGE REVENUES SHOULD BE ADEQUATE TO ATTRACT AND RETAIN COMPETENT STAFF AND TO COVER THE INCREASING COSTS OF EDUCATION.

Faculty salaries are lower, in terms of actual buying power, than at any time in nearly three decades. For certain rapidly-expanding areas, such as computer science and business, faculty salaries lag substantially. This makes it difficult for colleges to compete for and retain staff who may be attracted to the private sector. Salary and benefit adjustments exceeding normal cost-of-living may be necessary to rectify this situation.

Also contributing to greater-than-inflationary college cost increases will be the character of future students. Larger numbers of underprepared students will require greater use of small groups (classes, tutorials, etc.) in the future. This challenge can be met only by an improvement in the level of resources (staff, equipment, and facilities) that colleges are able to bring to the instruction and support of each student.

Most of the future expansion of community college instruction will be in courses requiring laboratories or shops and increasingly sophisticated and more rapidly changing equipment. This also will contribute to higher-than-normal cost increases.

Present funding policy has provisions for inflationary adjustments along with some enrollment growth, but no provision for any significant adjustment in the amount of resources community colleges have available for instructing each student. Further improvements will be necessary even though it will be possible to secure economies from the use of new information processing technologies. Use of these new methods can make teaching more cost-effective. However, it is likely that the higher costs resulting from future changes in students and curricula, noted above, will more than compensate.



X. *COMMUNITY COLLEGES SHOULD EXPLORE ADDITIONAL FUNDING SOURCES.*

Future sources of community college funding need to be examined. The emerging characteristics of students argue for keeping their costs and, therefore, their contribution low. The expansion of business-supported education and the need for greater collaboration between community colleges and these firms suggests that private funds could become a greater part of the community college's financial support in the future.

Collaboration requires work, however, and needs to be encouraged by financial incentives. Such incentives could take the form of state grants to match other sources of funding such as private gifts, endowments, and contracts. This "mixing" of public and private monies would be a dramatic and seemingly-productive departure from traditional funding methods.

Heavy reliance on one source of public funding, the state General Fund, leaves community colleges subject to the state's economic fluctuations. Greater reliance on more stable sources, like the local property tax, could ease that concern. A broader base of funding is needed for both operations and capital outlays.

Efforts to obtain a majority-vote local taxing capability should continue. This capability would need to be accompanied by the proper incentives so that at least part of added local tax revenues would be available for local initiatives and not simply replace state General Fund support. More flexible lease, lease-purchase, and borrowing arrangements also should be explored to support capital outlay projects.

THE CHALLENGE

THE CHALLENGE

The challenge would not be so formidable if the community colleges fit the mold of traditional higher education, but their very strength lies in the fact that they do not. The community college is unique among institutions of higher education. It is unique in its response to educational needs of the local community, in the scope of its programs, and in its ability to change curricula to meet the needs of a changing society, yet maintain stability in its traditional offerings. It provides students with the opportunity to make well-informed and wide-ranging decisions about the education they need for their lives and careers. With a faculty committed to teaching, its diverse clientele includes those not well served by other institutions.

Changing circumstances demand changing practices if California is to maintain its tradition of excellence in education. This working vision reveals that the fundamental challenges confronting community colleges are to:

- make certain that quality education is available to the increasing number of adults who must gain access to postsecondary education but who are underprepared and for whom English is often a second language
- design new ways of teaching the broad skills and values of general education as a foundation for the special skills required for work in a society that is becoming more technically-complex
- introduce new technologies of instruction to complement effective traditional methods
- strengthen assessment and tailor instruction more to individual needs in order to upgrade student performance
- take responsibility for adult literacy and productivity in cooperation with other providers of postsecondary education
- demonstrate the results of community college education by the measurement of what students learn and the ways they use that learning
- recognize that a common statewide interest cannot be served unless local colleges are able to respond to community needs that vary dramatically across the state

Some of these challenges may seem familiar. What is new here is the fact that a more diverse population and more rapid economic and social changes will make these challenges more difficult than ever before. Expected future conditions point to the need for strengthened and more diversified community colleges to ensure a literate, skilled and responsible California citizenry.

Contours of Change challenges:

LOCAL DISTRICTS to examine and apply its broad trends and implications to their particular communities for long-range planning

THE STATE BOARD to consider the important future trends and implications in its policymaking and leadership activities

THE LEGISLATURE AND GOVERNOR to consider the mosaic portrayed by the seven premises and their implications to assist them in their policy decisions on the allocation of public resources

CALIFORNIANS to recognize the importance of investing in their future through education

REFERENCES

The following source documents provide the basis for trends cited in *Contours of Change.*

GENERAL

Several documents are used as sources throughout the report:

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• College Planning: Strategies for Assessing the Environment	Techniques for large group evaluation and synthesis of trends external to the college
• Models of Strategic Planning in Community Colleges	Description of planning procedures used in four college districts.
• Working Paper #4 Delineation of State Agency, Accreditation, and Institutional Responsibilities	A proposed delineation of role in evaluation of colleges.
• Working Papers #5, 6, 7 Planning and Accreditation: A Survey of Attitudes	A summary of views held by legislators and agency and college staff in Hawaii and California.
• Working Paper #8 Information System Support	Ways of improving state-level information for evaluation and planning.
• Working Paper #9 Evaluating Statewide System	Guidelines and illustrations for assessing the achievement of major state interests.
• Working Paper #10 Measuring Community College Learner Outcomes: The State-of-the-Art	A survey of the literature and bibliography on outcomes evaluation.
• Working Paper #11 Evaluating Statewide Objectives	A revision and expansion of working Paper #9.
• Special Newsletter on Learner Outcomes Symposium	A recap of views expressed by national leaders on outcomes evaluation.
• Learner Outcome Handbook	A description of evaluation techniques for measuring and analyzing the outcomes of learning.
• Student Survey Item Bank	Over 500 survey items designed to gather information on learning outcomes.
• General Newsletters	Describing general status of project.
• Evaluating the Community Colleges	A memorandum of understanding between the California Board of Governors and the Western Association Accrediting Commission.

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